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THE C. & D. DIARY FOR 1905.

THIS is now in preparation, and the publisher is booking orders for advertisements for it. We can assure business houses that there is no more economical and profitable method of keeping goods under the notice of buyers every business day of the year. Some firms find it pay them to insert their complete price lists in the *Diary*.

A copy of the *Diary* is presented free to each one of the thousands of subscribers to THE CHEMIST AND DRUGGIST at home and abroad. The *Diary* is the best buyers' guide in the world, and is used daily by business men in ordering goods advertised in it. Every member of nineteen Chemists' Societies in the British Empire receives a copy of the *Diary*, and thousands of buyers besides. The literary contents are always highly valued by the trade. So great was the demand for the 1904 *Diary* that an extra large edition was exhausted within a week of publication. The *Diary* advertisements are carefully analysed by a staff of professional indexers, who thus bring together nearly ten thousand references, forming a unique buyers' guide. The *Diary* is referred to all the year round by over ten thousand buyers, and when they want goods they turn up the buyers' guide and order from the advertisements. Instructions and orders for advertisements should be sent as early as possible to The Publisher of *The Chemists' and Druggists' Diary*, 42 Cannon Street, London, E.C.

Summary.

THE CHANCELLOR OF THE EXCHEQUER has appointed a Committee to inquire into the use of duty-free alcohol for industrial purposes, Sir Henry Primrose, K.C.B., being Chairman. The names of the members and some personal notes about them are printed on p. 487.

FOR THE TERMS OF THE REFERENCE see an article which begins on p. 468. In this we deal historically with the subject, showing that Professors Thomas Graham, A. W. Hofmann, and Theophilus Redwood, who advised the Revenue authorities in devising methylated spirit, desired to foster British chemical industry, by using purified wood-naphtha as the denaturing agent. It is also shown that the spirit section of the 1902 Finance Act is a reversion to this point (p. 470).

IN CONNECTION with this subject we call attention to the report of the Commissioners of Inland Revenue, which shows the amount of duty-free spirit used industrially last year, besides the amount of methylated spirit made (p. 473).

EINEPHRINE is the subject of an investigation by Abel which is briefly abstracted on p. 466.

FURTHER PARTICULARS regarding a portrait of the late Mr. W. Weightman, Philadelphia, are given on p. 476.

We give a synopsis of the new pharmacy regulations which are proposed for Russia. They contain novel provisions (p. 471).

THERE are two quinine glycerophosphates—neutral and basic. Carré has done some work on them, which is described on p. 466.

FOR JOHN GILPIN our Association Bard finds a modern instance in Lord Gifford, a citizen of famous Blackburn town (p. 466).

CANADIAN DRUGGISTS propose an anti-cutting scheme which would give retailers face-value and wholesalers 15 per cent., freight paid (p. 473).

THE C.O.D. BY POST proposal looks a bit more serious just now, and it would be well for those interested to note the advice given by "Xrayer" (p. 467).

AT the Confectioners' and Bakers' Exhibition held in London this week we inspected several interesting devices which we believe chemists can use. They are described on p. 488.

THE ANNUAL MEETING of the Society of Chemical Industry was commenced in New York on Thursday, Sir William Ramsay presiding. We print a preliminary illustrated report (p. 477).

OUR SPECIAL REPRESENTATIVE at the St. Louis Exhibition deals in this week's report with the chemical and pharmaceutical exhibits by the United States (meagre), France (good, but badly managed), and Germany (the most interesting). The report is illustrated (p. 485).

THERE was an exceptionally large increase in the number of medicine-vendors' licences issued last year, but a big decrease in stamps sold. We have made some timely calculations from the official figures, showing that the average sales per licensee amount to 671 a year. The figures are given in our remarks on the Inland Revenue report (p. 473).

DR. JOHN WADE and Mr. Horace Finemore find that chloroform made from alcohol contains a trace of ethyl chloride, which plays an important part in the initial anæsthesia. Chloroform made from acetone is free from ethyl chloride, thus (although pure) is not so good an anæsthetic. See the article on p. 472.

THE COMPANY SECTION of the Transvaal Medical and Pharmacy Ordinance is not by any means emasculated. It prevents use of titles by associations or societies of unregistered persons, makes every director of a company liable for offences committed by such company, and in other directions secures more efficient control of company-chemists (p. 471).

THE MARKETS are almost featureless this week so far as fluctuations are concerned. American and Japanese peppermint oil are the principal articles of interest. Morphine and cocaine are unsettled, and a reduction would not be surprising in view of the large opium-crop. Coriander, copper sulphate, and cantharides are dearer; Japanese wax is tending easier; raw lime-juice, cloves, and turpentine are lower (p. 481).

MR. DAVID HOWARD does not agree with Dr. B. H. Paul's conclusions regarding the official test for quinine sulphate. He says the very varying statements as to its solubility quoted by Dr. Paul may probably be explained by the purity of the ether used, a small percentage of spirit greatly increasing the solubility of cinchonidine. Mr. Howard suggests that it might be wise for the B.P. to adopt the excellent test now in the Codex Français (p. 475).

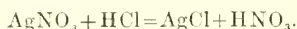
Corner for Students.

CONDUCTED BY LEONARD DOBBIN, PH.D.

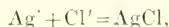
Salts, and the Ionisation Theory.

FURTHER APPLICATIONS OF THE IONISATION HYPOTHESIS.

SEEING that the great majority of salt reactions by which precipitates are produced involve only one or other of the ions of each salt concerned, it is sometimes convenient to represent, in an equation expressing the change, only such ions as actually take part in the formation of the precipitate. For example, if it is desired to represent by an equation the action that occurs when a solution of any silver salt (*i.e.*, a solution containing silver ions) is mixed with a solution of a chloride (*i.e.*, a solution containing chlorine ions), it is not necessary to take a definite representative of each class of salt and write such an equation as

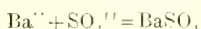


The more general equation

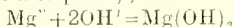


in which ionic symbols are used, is in some respects preferable, since the particular reaction under consideration is independent of the source of the silver ions or of the chlorine ions.

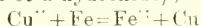
Equations of the first of the above kinds are those most commonly employed, but the student will find it an advantage to familiarise himself with the other kind by translating a considerable number of examples into the ionic form. In balancing such equations, it is necessary to pay particular attention to the electric charges indicated: if there is a like number of positive and of negative charges represented on one side, the same must be the case on the other, although the actual number on the two different sides need not be the same; if, on the other hand, there is an excess of one kind of charge on one side of the equation, there must be the same excess on the other. Thus



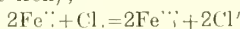
(precipitation of barium sulphate from solutions of a barium salt and of a sulphate);



(precipitation of magnesium hydroxide from solutions of a magnesium salt and of a hydroxide);

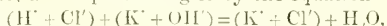


(precipitation of metallic copper from a cupric salt by means of metallic iron);

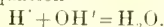


(conversion of ferrous salt into ferric salt by means of chlorine).

The typical method of forming a salt by the interaction of an acid and a hydroxide is, as has already been observed, a particular kind of double decomposition. If the acid (a strong one) and the base (an alkali) are in dilute solution, then they will be to a large extent ionised to begin with, and the resulting salt, being also in dilute solution, will also be for the most part ionised. Taking the case of hydrochloric acid and potassium hydroxide as an example, and representing it by the equation



it is evident that the anion of the acid and the cation of the alkali are practically unaffected by the action, as only a small proportion of these will unite to form molecules of the salt; and we therefore have the result, that the process of neutralisation consists merely in the mutual discharge of hydrogen ions and hydroxyl ions with formation of molecules of water. This explains why, in dilute solution, the heat of neutralisation is independent of the particular acid and base involved, provided they are both relatively strong—*i.e.*, highly ionised. The heat of neutralisation in such cases is merely the heat-effect of the change represented by the equation



In the case of comparatively weak acids and weak bases, however, where ionisation in moderately dilute solutions is still very far from being complete, the heat-effects due to the formation of the ions from their respective molecules also come into play, and the final results are different from

the constant results obtained in the case of strong acids and bases.

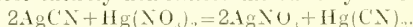
This particular kind of double decomposition is practically complete because one of the products—the water—is practically non-ionised. Perfectly pure water is an exceedingly poor conductor of electricity, but it is not absolutely non-conducting; for this and other reasons, it is necessary to assume the existence of a certain very slight ionisation of water molecules, the ions being H^+ and OH^- .

In the case of "insoluble" bases, the action of acids is analogous to that just described. As the substance is not absolutely insoluble in water, a small quantity of it dissolves, giving rise to a certain proportion of ions—the appropriate metallic ion or cation, and hydroxyl as anion (possibly some oxides give the anion O^{--} , but in most cases the small quantity of oxide dissolved will form hydroxide and yield OH^- as the anion). These hydroxyl anions unite with the hydrogen ions of the acid present, forming water, and the balance between the dissolved base and the solid base is thereby destroyed; more of the solid dissolves, and the process continues. From this point of view, therefore, the solubility of the base in acid depends on its solubility in water, slight though that may be.

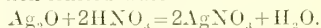
A similar explanation applies to the solubility of an insoluble salt of a weak acid in a solution of strong acid, except that in this case the sparingly ionised product is not water, but the weak acid. With salts of exceedingly weak acids the double decomposition may be practically complete without excess of the strong acid being present, just as in the case of the neutralisation of a base by strong acid. In those cases, however, where the acid liberated from the insoluble salt is not exceedingly weak, the double decomposition is more or less incomplete, and complete solution is only attained with a decided excess of the strong acid present. This is the state of affairs when calcium oxalate is dissolved by acids, as already referred to (*C. & D.*, August 6, 1904, page 230) in connection with methods of measuring the relative strengths of acids.

That the solubility of salts "insoluble" in water is not due to a property peculiar to acids, but, as already mentioned, depends upon the formation of some product which is either practically non-ionised or has a new complex ion, is shown by a number of very interesting cases, some of which may be considered here.

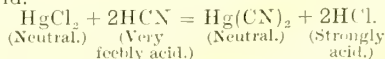
Silver cyanide is "insoluble," not only in water, but also in dilute nitric acid, in spite of the fact that hydrocyanic acid is a very weak acid. The quantity of silver cyanide dissolved by water is so very slight that the formation of hydrocyanic acid by double decomposition would not diminish the total concentration of CN^- ions. Nevertheless, the ionic concentration in a saturated solution of silver cyanide is much greater than in a solution of mercuric cyanide, which, though easily soluble, is practically non-ionised, and consequently silver cyanide dissolves readily in a solution of mercuric nitrate, the practical completeness of the interaction being due to the formation of this almost entirely non-ionised mercuric cyanide—



The action here is quite analogous to what takes place when silver oxide dissolves in dilute nitric acid, owing to the formation of non-ionised water—

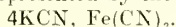


The peculiar character of mercuric cyanide which has been referred to above, leads to some remarkable and exceptional reactions. Thus, notwithstanding that hydrochloric acid is so strong an acid and hydrocyanic acid so weak, mercuric chloride in solution is almost completely decomposed by hydrocyanic acid. Mercuric chloride solution is neutral, and hydrocyanic acid is very faintly acid; when they are mixed, however, a strongly acid solution is obtained, owing to the production of a considerable concentration of hydrogen ions derived from the liberated hydrochloric acid.

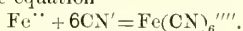


While the above cases, resulting in the production of mercuric cyanide, illustrate the formation of a non-ionised product, the formation of a new complex ion is exemplified in the production of a complex salt by the union of two

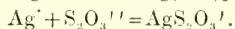
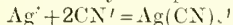
simpler ones, and the ionisation theory gives an explanation of the differences between such complex salts and double salts, which are also formed by the union of two salts. As an example of a double salt we may take potassium magnesium sulphate, $K_2SO_4 \cdot MgSO_4 \cdot 6H_2O$, which is obtained when solutions of potassium sulphate and magnesium sulphate are mixed and allowed to evaporate. When this double salt is dissolved in water the solution is found to behave simply as if it were a mixture of the two sulphates; it contains the ions K^+ , Mg^{++} , and SO_4^{--} . It might almost be said that the double salt existed only in the solid state. There are other cases, however, in which two salts unite together to form a definite compound which in solution does not behave like a mixture. Thus, ferrous cyanide (like most other cyanides practically insoluble in water) dissolves in solution of potassium cyanide (or other soluble cyanide), and forms a compound which (omitting its water of crystallisation) might be represented by the formula



A solution of this substance does not behave like a mixture of two cyanides, however. It contains K^+ ions, but apparently practically no Fe^{++} ions or CN^- ions; the metallic radical is potassium only, and the acid radical all the remainder—i.e., $Fe(CN)_6^{--}$. Here we have to deal with a single salt, potassium ferrocyanide, and its formula is written $K_4Fe(CN)_6$. The solubility of the ferrous cyanide in solutions of other cyanides is therefore due to the action expressed by the equation—



Complete solution is effected with practically no excess of the soluble cyanide, because the complex ion represented on the right of the equation yields practically none of the ions represented on the left. Many similar cases are known. Thus, practically all silver compounds (the only important exception is the sulphide) dissolve in solutions of thiosulphates and also of cyanides (*except mercuric cyanide*), giving rise to salts which do not give the usual reactions of silver salts; in each case the silver forms part of the acid radical, which yields its own complex ion. Using ionic symbols, the actions may be represented thus—



The potassium salts corresponding to these would be represented by the formulæ $KAg(CN)_2$ and $KAgS_2O_3$.

At first sight the double salts before referred to seem to be quite different from these complex salts; their formation depends on the fact that they are less soluble than their component salts. Investigation shows, however, that there are intermediate stages between the two classes, and we may assume that a solution of potassium magnesium sulphate contains a certain proportion of $K_2Mg(SO_4)_2$ molecules in equilibrium with the K^+ ions and with a small proportion of $Mg(SO_4)_2^{--}$ ions; just as, on the other hand, a solution of the above-mentioned potassium argento-cyanide, $KAg(CN)_2$, contains a minute concentration of Ag^+ and CN^- ions, in equilibrium with the complex ion $Ag(CN)_2^+$.

English News.

Local newspapers containing marked items of news interesting to the Trade are always welcomed by the Editor.

Brevities.

Food and drug inspectors have been sampling sweet spirit of nitre in the North of London.

The Spalding Board of Guardians have accepted the tender of Messrs. Donington & Co., chemists, Spalding, for the supply of quinine at 1s. 6d. per oz.

A correspondent informs us that Mr. Robert Moser, chemist's apprentice, of George Street, Lancaster, has been admitted a freeman of the borough by the Mayor.

At a recent competition at Wotton-under-Edge for tradesmen, for horse, trap, and harness, Mr. Frank Portlock, chemist and druggist and mineral-water manufacturer, was awarded first prize for the best turnout.

At Swindon Petty Sessions on September 1, Gilbert Thompson (14) was sent to a reformatory for four years, for stealing a bicycle belonging to Mr. S. A. Warner,

chemist and druggist, and for stealing money from his father.

A long letter appeared in a recent issue of the "Bradford Daily Telegraph" urging consumers and shopkeepers alike to resist the imposition of the C.O.D. postal system.

Messrs. Lander & Smith, chemists and scientific-apparatus makers, Canterbury, were awarded the silver medal—highest award—at the Royal Cornwall Polytechnic Exhibition held at Falmouth in August, for meteorological apparatus.

Annie Durkin was committed to the assizes at Chester, on August 24, charged with uttering forged cheques. It is alleged that prisoner succeeded in passing a forged cheque for 4l. 10s. on the manager of Boots (Limited), of Eastgate Street, Chester.

At the Guildhall Police Court on September 7, Herbert Reed (43), a traveller, was committed for trial on charges of obtaining, by means of a forged receipt, a cheque for 65l. 17s. 8d. from Messrs. Burroughs Wellcome & Co., and of forging the endorsement, and stealing articles valued at 181l. from his employer M. Louis Vuitton.

At Nottingham on August 31, Frederick E. St. John, chemist's assistant, who pleaded guilty to stealing thirteen bottles of scent, a quantity of soap, and other goods, value 35s., the property of his employer, Mr. Reuben Widdowson, chemist, Arkwright Street, Nottingham, was fined 5l., or in default one month's imprisonment.

A Stockport girl, May Sheldon Hague (5), had been suffering from measles and was confined to the house. In a cupboard she found some homeopathic nerve-pills, five of which she ate. She subsequently became ill, and was taken to the infirmary, where she died. At the inquest, on August 29, her mother said she had given a boy six of the pills without ill effect. The jury decided that the manufacturer of the pills should be called, and the inquiry was adjourned for that purpose.

Holborn Contracts.

At the meeting of the Guardians of the Holborn Union, on September 7, the following tenders were received for the supply of drugs to the several establishments of the Union during the ensuing twelve months: Messrs. Hodgkinson, Prestons & King, 30 per cent. below schedule; Messrs. Baiss Brothers & Stevenson, 33½ per cent.; Messrs. Manners & Hopkinson, 40 per cent.; Messrs. Corbyn, Stacey & Co., 30 per cent.; Messrs. Burgoyne & Co., 31 per cent. The tender of Messrs. Manners & Hopkinson (the present contractors) was accepted.

The Guardians had before them also two tenders for the supply of mineral waters for the year ensuing. These came from the London Super-Aëratice Company and from Camwal (Limited). The goods required were soda-water in syphons, for which the L.S.A.C. quoted 2s. and Camwal 1s. 9d.; soda-water in large screw-stoppered bottles, which each quoted at 1s. per dozen. For soda-water in small screw-stoppered bottles only the L.S.A.C. quoted, and that at 9d. per dozen. For lemonade in syphons the respective prices were 2s. 6d. and 2s. 9d.; ditto, in large screw-stoppered bottles, 1s.; ditto, in small, 9d. and 10d.; lithia-water in syphons, 2s. and 2s. 9d.; ginger-beer, in screw-stoppered bottles, 1s. and 10d. per dozen respectively. The L.S.A.C. got the contract.

Spectacle-makers' Company.

The next examination for the diploma in general optics will be held at the Cannon Street Hotel on Monday, Tuesday, and Wednesday, November 14, 15, and 16, and the examination in sight-testing for that diploma on Monday, Tuesday, and Wednesday, November 28, 29, and 30. Candidates who intend entering for these examinations are requested to make early application to the Clerk of the Guild, Colonel T. Davies Sewell, F.R.A.S., 11 Temple House, Temple Avenue, E.C.

Fires.

A fire occurred on August 31 in a store-room at the premises of Mr. A. W. Campsall, chemist and druggist, of Broad Street, Parkgate, Rawmarsh. The conflagration was caused by a lighted match dropped by the errand-boy. The damage, estimated at 70l., is covered by insurance.

On August 30 a fire broke out on premises of Mr. W. J.

Aspinall, chemist, at 34 Preston New Road, Plackburn, the outbreak being caused by the overheating of some turpentine and wax in the laboratory. The fire was confined to that department. Walter Makin, an assistant, was burnt about the face, and had to be medically attended.

Army Medicine-contract.

The Army Medical Department has just decided the triennial contract for the supply of medicines to the British Army. A considerable number of wholesale houses tendered, and the contract for the three years beginning October 1, 1904, has been given to Messrs. Davy Hill & Co., Park Street, Southwark, S.E., on the same basis as they held it before for $4\frac{1}{2}$ years up to October 1, 1901, and thus during the South African War.

Birmingham Notes.

Mrs. J. H. Shorthouse has edited the correspondence and papers of her late husband, the author of "John Inglesant," who was a manufacturing chemist. They are to be published in the autumn.

In reference to a note in this section last week, the Birmingham Household Supply Association (Limited) inform us that they have never had a business in High Street, Birmingham, and are not in any way responsible for the conduct of the business which was carried on there some years ago under a somewhat similar name.

The Shop-hours Act is setting up much confusion in Birmingham. The drysalters who supply factories which close at one on Saturdays desire that day as their half-holiday, whereas chemists and druggists prefer to stick to Wednesday, and could not afford to be closed on Saturday afternoon, when most of the week's business is done.

Mr. George Heaton, one of the masters of the Birmingham Mint, died of heart-disease on Saturday, September 3. Those who can cast their minds back to the last Birmingham Conference (1885) will remember that although the British Association met in Birmingham at the same time, through his courtesy the former were alone allowed the privilege of inspecting the works under his immediate guidance, and subsequently brass tokens of their manufacture were handed to each visitor.

With reference to the note regarding the late Mr. W. J. Churchill (*C. & D.*, August 20, page 360) we learn that "Pâte de Lichen" was introduced about 1850 by Mr. Francis Christian, of Birmingham, and sold by him until his death in 1864, when the sole rights were purchased by Mr. J. Arblaster. It was sold as "Christian's Pâte de Lichen" until Mr. Arblaster sold his business in January of this year, when the rights in "Pâte de Lichen" were acquired by Messrs. Southall Brothers & Barclay (Limited), of Birmingham, by whom it is now manufactured.

Poor-law Notes.

The question of the appointment of a district medical officer was discussed at the last meeting of the Newcastle-upon-Tyne Board of Guardians. It was proposed that the salary should be 80*l.* a year, out of which amount the doctor was to provide the requisite medicines. An amendment that the salary should be 100*l.* was lost.

The advice of the Local Government Board has been sought by a Board of Guardians as to the arrangements for the supply, at the cost of the Guardians, of expensive medicines required for the sick poor, and the Board have suggested that the Guardians should arrange to pay for the drugs used on being furnished by the medical officer at the end of each quarter with a detailed statement of the quantities supplied during that period. This information is obtained from the "Local Government Chronicle." The name of the Union in question is not given, but it is obvious that a pharmacist somewhere is not making the most of his opportunities.

The Glyn-Jones Testimonial.

The Executive Committee have this week issued a letter to local associations in regard to the presentation to Mr. W. S. Glyn-Jones, on October 5, at the Hotel Cecil, London. They believe that a large number of chemists throughout the country would like to unite in this testimony to a gentleman who has done such notable service to the trade during the past eight years, and invite co-operation in bringing the matter to the notice of chemists. The Executive are desirous that the list of signatures of contributors to the

testimonial should be as large as possible. We are also informed that the arrangements for the dinner are now being made and it is desirable that those who wish to attend should write as early as possible to Mr. G. R. Barclay, 90 Farringdon Street, London, E.C. Mr. R. A. Robinson, L.C.C., President of the Pharmaceutical Society, has, on the invitation of the Executive Committee, promised to take the chair at the dinner.

Grimsby and District Chemists' Association.

A general meeting was held at the Oberon Hotel, Grimsby, on Tuesday, September 6, Mr. C. Dewing in the chair. There was a small attendance. The Secretary read correspondence received since the last meeting and presented a number of accounts for payment. It was resolved to pay the accounts due. The Secretary reported that he had attended the meeting of the Federation of Local Associations, held at Sheffield in August, as the delegate of this Association. It was resolved to hold meetings monthly during the winter, and to hold the postponed dinner on November 17. The meeting was then resolved into a committee of the Buying Section.

Sheffield Notes.

Another new venture in pharmaceutical enterprise is the branch shop which has been opened in the growing suburb of Norton by Mr. B. Simpson, chemist and druggist, Chesterfield Road.

The Sheffield Board of Guardians have accepted the tender of Messrs. Evans Sons Lescher & Webb (Limited) for fitting up the new laboratory and dispensary in connection with the extensions at the Union infirmary.

Mr. J. E. Alcock, chemist and druggist, Broomhill, is extending his operations by taking over the shop of Mr. Ibbitt, Meadow Street, the latter having retired owing to continued ill-health. Mr. Alcock has had his Broomhill business for about six years, and will carry on the Meadow Street shop as a branch.

The Chemist and the Cook.

At Clerkenwell Police Court on September 5, Sarah Vyse (36), a cook, living at Regent's Park, N.W., was charged, before Mr. D'Eyncourt, with inciting David Bowen Jones to perform an illegal operation by administering drugs at 98 Gray's Inn Road. A detective deposed that on September 1 he received a communication from a chemist at 98 Gray's Inn Road, W.C., in consequence of which he went to that address on September 2, and stood behind the door of a room at the back of the shop. In this position he overheard a conversation between the chemist and the prisoner. He heard Vyse say that she did not care what she paid to get out of her trouble—50*l.* or more than that. Subsequently he appeared before the prisoner and interrogated her. She said the chemist asked her to come to the shop on different occasions. The chemist then said, "You asked me what was the matter. I told you that I treated you for a cough." The prisoner was remanded.

Alleged Wrongful Conviction.

It is stated that a man named Shellard was in June last released from Devises Goal shortly after being sentenced to six months' imprisonment for frauds in connection with the sale of eucalyptus cigarettes. At the trial Shellard protested his innocence and sought to establish an *alibi*, bringing a number of witnesses from Nottingham who swore that he was in that town on the date mentioned in the charge. On the other hand, several people in Warrington were equally emphatic that Shellard called on them on the day in question and tried to sell them cigarettes. Shellard was committed for trial, and at the Wilt Quarter Sessions in April last he was, after another conflict of evidence and his repeated denials of the offence, sentenced to six months' imprisonment. A few days later, according to report, the Swindon Police arrested a man named Butt in connection with the same charge. On having the warrant read to him and being informed that Shellard had already been sentenced, Butt exclaimed, "Good God! you have made a great mistake. The wrong man has been punished, and I will clear him." At his trial Butt declared that Shellard had nothing to do with the affair. Butt was sent to prison for six months, and a day or two later Shellard was liberated from Devises Goal.

Alleged Arsenical Poisonings.

Mary Ellen Latter and Thomas Latter were remanded at Margate, on September 2, charged with the manslaughter of their two children by arsenical poisoning. The Bench refused to accept bail in the case of the woman, and fixed the man's at 100*l.* and two sureties of 25*l.*

At St. Helens, on September 5, Joseph Burndred and Ellen Burndred were charged with the wilful murder of Sarah Anne Jones, their adopted daughter. The body was exhumed on August 20, a fortnight after burial, and Mr. Edward Davies, analytical chemist, Liverpool, gave evidence to the effect that he found quantities of arsenic in the body sufficient, in his opinion, to cause death. The accused said they knew nothing about the girl's death. They were remanded.

Dewsbury Chemists' Association.

There was a fair attendance at the opening meeting of the session held at Dewsbury on September 5, when Mr. J. Rhodes presided. The Secretary (Mr. G. Walker) read a number of letters. One had reference to the Glyn-Jones Testimonial Fund. Another was from the Drapers' Chamber of Trade, asking for the co-operation of the Dewsbury Association in endeavouring to secure an amendment of the law in regard to the liability of husbands for debts contracted by their wives. A Mr. Robert Mountain, of Rawtenstall, Lancashire, had written concerning co-operative buying, and asking why the Dewsbury Association had given up this system. Mr. Walker said he had replied to this communication stating that they had not abandoned co-operative buying. At a special meeting in July it was decided to subscribe 2*l.* 2*s.* to the Glyn-Jones Testimonial Fund. Mr. W. Stead said he considered that was a paltry sum to send from Dewsbury. Unless they could send a better subscription he thought it would be far better to allow members to subscribe individually. He proposed that the Association contribute 5*l.*, which would only represent 5*s.* per member. Mr. J. Day seconded, and Mr. R. Broadhead said he would contribute his quota. He objected, however, to the testimonial being made into a gigantic affair. If all associations subscribed proportionately the fund would probably amount to between 3,000*l.* and 4,000*l.* He doubted whether Mr. Glyn-Jones had earned that. Several members expressed the opinion that Mr. Glyn-Jones was worthy of whatever they could do for him. Mr. Gledhill, Mr. Stead, and Mr. Gutteridge all stating that he had put more money into each of their pockets than they now proposed to give to the fund. It was also contended that Mr. Glyn-Jones would continue to fight for their cause. Mr. Broadhead, however, ventured the opinion that Mr. Glyn-Jones would continue to use his influence on the side of the interested clique who had so long ruled them. If chemists would only look into the question, they would see how they had been misgoverned. The question of titles ought to be threshed out, but a test-case would not be taken into the courts while the present men were at the head of affairs. He was proceeding to argue on this point, but was ruled out of order. Mr. Stead's motion was then put and carried. Mr. J. Day, Local Secretary of the P.A.T.A., said he had received a letter from Mr. Glyn-Jones respecting the register of Dewsbury, which he was asked to correct if necessary. Mr. Day said the list contained the names of two men who were not qualified, and he promised to write Mr. Glyn-Jones. Mr. Gutteridge, the Divisional Secretary, was also instructed to write to the Pharmaceutical Society, drawing attention to the fact that these names appeared in Kelly's Directory.

A Day Out.

On September 3 the wholesale staff, and as many of the retail as could be conveniently spared, of the firm of Messrs. Holman, Ham & Co., Exeter, held their annual outing, travelling to Exmouth by train, and driving thence to Nutbrook, the residence of Mr. Rowsell, head of the firm. There a very pleasant time was spent. In the afternoon croquet, etc., were played. At high tea afterwards several complimentary toasts were honoured, then a few more games indulged in, and the party was photographed. The return to Exeter was made by the 9.35 train.

A Window Smash.

The fine corner shop of Messrs. Elgey & Son, in the Market Place, Driffield, was wrecked on September 6 by a runaway horse attached to a gig. The horse dashed head-

foremost through the plate-glass window (dragging the shafts with it) right into the centre of the shop. Two or three assistants were badly scared and had narrow escapes from injuries by the flying *débris*. The window-contents were completely destroyed. The interior of the shop, nearly all the movable articles on the counter-cases and on the counters themselves, were hopelessly mixed and smashed, fancy articles and drugs, paints, powder and pills being scattered over the premises. Woodwork was torn away, and even the glazed brickwork was knocked out of position by the impact, the footpath as well as the shop being covered with solids and liquids. The horse was fatally injured.

The Week's Poisonings.

Only four deaths from poisoning are reported since our last record, all of them being suicides. Mr. James Henry Lewis, a Birmingham engineer, overbalanced his brain with study, and took a fatal dose of potassium cyanide.—Mr. C. F. Bryce, formerly a brewer's chemist, was found dead in bed at Burton-on-Trent. He had taken a large dose of strong solution of ammonia.—Mr. Aaron Waddington, formerly a Bradford manufacturer, poisoned himself at Morecambe with laudanum and vermin-killer.—Thomas Howe (71), a Stepney leatherseller, became depressed by being unable to find employment, took a fatal dose of oxalic acid in the street, and died in the London Hospital.

Irish News.

Local newspapers containing marked items of news interesting to the Trade are always welcomed by the Editor.

Pharmaceutical Society of Ireland.

Applications for admission to the October examinations should be lodged with the Registrar not later than 11 A.M. on the following dates: Thursday, September 22, for the Preliminary examination; Tuesday, September 27, for the Registered Druggist examination; and Wednesday, September 28, for the Pharmaceutical Licence examination.

Scotch News.

Local newspapers containing marked items of news interesting to the Trade are always welcomed by the Editor.

Another one.

Inmans Stores (Limited) have opened a new branch drug-store at 16 Nicolson Street, Edinburgh.

A New Factory.

At the Crieff Dean of Guild Court on August 31 the plans of a new aerated-water manufactory for Messrs. Harley & Watts, chemists, were passed, subject to certain conditions.

Dundee University College.

The additions to this College for the purpose of giving more room to the medical department are almost complete, and more class-rooms will be ready for occupation next month. A new chemical laboratory has also been built, and is admirably fitted.

French News.

(From our Paris Correspondent.)

GLASER, THE CELEBRATED APOTHECARY who was demonstrator of chemistry at the Jardin des Plantes, was accused by M. Funck-Brentano, in a recent book, of having supplied to St. Croix the two poisons (the "whitish water" and the "reddish water") with which the latter poisoned his mistress. MM. Cabanes and Nuss combat this theory, and believe Glaser to have been entirely innocent of all participation in this matter.

OPERATING UNDER CHLOROFORM.—It has been definitely settled that the patient who died at the St.-Antoine Hospital, Paris, recently while being operated on under chloroform was suffering from a weak heart, and that death was due to heart-failure. The matter caused some stir in pharmaceutical circles at the time, as the operating surgeon, Dr. Blum, attributed the death to the impurity

of the chloroform, and the reputation of the Hospital pharmacists was in a measure at stake.

THE LEGION OF HONOUR.—Professor Domergue, chief pharmacist of the Hôtel Dieu Hospital, Marseilles, and the principal professor at the School of Pharmacy in that city, has been named a Knight of the Legion of Honour.

AN ORIGINAL POSTER.—The visits of the Shah of Persia to Contrexéville to "take the waters" has been an excellent advertisement for this well-known establishment on the German frontier of France. The enterprising little town does not, however, neglect other means of publicity, and I have noticed posters at some of the principal railway stations during my journeys in France which somewhat vary the commonplace monotony of thermal advertisements. A Mephistopheles-like individual of scarlet hue was conspicuously represented. Above was (naturally) a view of the establishment. In a gloomy cave below gnomes vigorously poured out and mixed sulphate of soda, sulphate of lime, carbonic acid, etc., under the superintendence of a gnome-*savant* with book and spectacles. Other dwarf-like figures pumped the product of their labours up to the establishment above.

THE MORTALITY QUESTION.—A recent number of the Paris "Revue" contains an interesting article by Dr. Lowenthal, an expert on the question of mortality in France. He brings forward new facts on this rather thorny subject, and contends that the diminishing population from which this country is suffering is to a certain extent the result of premature death or even avoidable disease. The mortality of the urban populations in France is greater than that of the average town in Great Britain, while the French Army and colonial forces suffer in the same proportion. The immoderate use of spirits he considers one of the causes of the high mortality and also infectious diseases which, though abating in other countries, show no decline in France. Smallpox still claims thousands of victims in French colonies, mainly owing to the prejudices of the natives.

ON ANTISEPTIC-TREATED FOOD.—At a recent meeting of the Paris Academy of Sciences, Professor Bouchard read a paper regarding the question of bacteria and the sterilisation of food. The author was Dr. Charrin, who has been experimenting on the lines opened out by Professor Metchnikoff, who never loses sight of the fact that certain bacteria are beneficial, if not exactly essential, to human life. Dr. Charrin's experiments were made with rabbits, some of which were nourished on various kinds of vegetables sterilised by the most approved processes. Others were fed on similar sterilised vegetable food which had afterwards been treated with bacilli. The first lot of rabbits, which had been spared the bacteria, died soon after as the result of enteric maladies resulting from the non-assimilation of the vegetables that had been sterilised. On the other hand, the rabbits, which had absorbed the bacteria, not only lived, but absolutely flourished. The deduction the young *savant* makes from this experiment is that it is erroneous to lay down a hard-and-fast rule as regards human beings that the less bacteria there are in their daily food the better.

THE "DRAGEES D'HERCULES" ("Hercules' Lozenges"), played at the Palais-Royal Theatre, Paris (a stage not famed for producing Puritan plays), is the title of a popular farce now making the tour of the provinces. The interesting point to pharmacists is that the enterprising *impresario* uses the advertising methods generally employed by the vendors of patent medicines here. On the table of the reading-room of a commercial hotel I visited during a short stay in Brittany recently, I found what was apparently a pharmaceutical handbill with the orthodox testimonials, &c., but which turned out to be an advertisement for this piece: "Dose.—One of the Hercules' Lozenges is sufficient to restore health. A repetition will serve as a preventive against any new attack of melancholy." They are recommended as a first-class "moral reconstituant" and "anti-neurasthenic remedy," and cure the "most tenacious melancholy and all maladies" of a similar nature. Every purchaser of a programme is offered a box of the famous lozenges on application at the box-office. The curious feature of the whole matter is that these innocent sweetmeats (manufactured

by an Anglo-French firm in Paris, by the way) really exist, but have not on all constitutions—at least, so say those who speak from experience—the effect illustrated on the poster. This represents a box of lozenges, on the lid of which an ardent swain is pursuing a somewhat mature and unattractive female. Below is the inscription, "And he has only taken ONE lozenge!"

THREE YEARS AGO.—Finding myself at Nancy recently, the terrible tragedy which thrilled the French pharmaceutical world three years ago came back to my mind, and I found time to revisit the spot where the Director of the Superior School was murdered by the pharmacist in whose *officine* he had seized a parcel of cinchona-bark for analysis. The frontage of the "Palace of the Faculties" in the Place Carnot is not devoid of architectural pretensions, but the rear portion of the building, devoted to the School of Pharmacy, contained no feature worthy of a snapshot. On the first floor, outside the door marked "Botanical Collections," a black marble slab has been fixed bearing in gilt letters the simple inscription:

To the memory of G. M. Bleicher,
Director of the Superior School of Pharmacy.
June 8th, 1901.

This marks the date, and as nearly as possible, the spot, of the Director's death. It may be remembered that Professor Bleicher occupied the chair of botany. I also visited the Pharmacie Lorraine, in the rue Raugraff, of which M. Four, the murderer of Professor Bleicher, and who committed suicide, was formerly the proprietor. This large and prosperous establishment was disposed of by M. Four's widow to M. Pagel, who enjoys the distinction of being the first candidate for the new degree of doctor of pharmacy of the Nancy University. The new proprietor, I hear, is anxious to do away with the reproach of "cutting," which seems to have gained M. Four an unenviable reputation among his fellow-pharmacists, but as it is a difficult and dangerous experiment to suddenly change the character of a business, the idea is to gradually raise prices up to the average Nancy standard. M. Pagel was formerly preparator to M. Schlagdenhauffen, the veteran Director who (having reached the limit of age laid down by French University regulations) was obliged to resign his functions a couple of years ago.

PHARMACY AT TARASCON.—Having a few hours to spare at Tarascon recently, I resolved to hunt up Bezuquet and Pascalon, the pharmacists immortalised by Alphonse Daudet, or at least their modern successors. The Didot-Bottin (provincial directory) studied at a *café* convinced me that only three pharmacies existed in the town Tarascon, so that my quest seemed likely to be a brief one. But none of these establishments answered to the description of the novelist. M. Cormod's in the rue des Halles, M. Demery's in the rue Salaire, M. Descomps' in the rue St. Nicolas do not give "on a little square." They are all quiet little shops of the usual Southern French stamp, innocent of the slightest attempt at window-display. Each, I noticed, had a "droguerie" in close proximity which encouraged the pharmacist to practise the "pure pharmacy," so dear to some minds, by the efficient process of offering the public every medical sundry of which the French law permits the sale by non-pharmacists. And bearing in mind Bezuquet's intimacy with the gunsmith Costecalde, it is curious that the two gunsmiths of Tarascon live hard by these pharmacies. On my way back to the station I looked at the hospital, and found an interesting pharmacy, an old place with the date 1742 on the shelves. Above the door the word "Emplastra" surmounts a series of pigeon-holes now filled with drug-jars. Some thirty drawers, gilt-lettered, bear the names of the stock drugs of former generations. The pharmacy is in the charge of Sisters of Mercy, and the head Sister's chief pride was the collection of old blue-and-white earthenware, some 150 pieces, syrup-jars, ointment-pots, and pitchers for plantain-water, bugloss-water, and twenty other simple decoctions; "Nearly all Moustier ware," she said, "but a few from Marseilles." She added that the great flood of 1856—when the Rhone burst its banks and swamped the pharmacy—was responsible for the various breakages noticeable. An adjoining room—once fitted in a similar manner, I was told, but now modernised—is used for the actual dispensing, and this old pharmacy is kept up as a sort of museum.

Australasian News.

Communicated by the Australian Staff of "The Chemist and Druggist."

The fullest information regarding the Australasian drug-trade and pharmacy is given in "The Chemist and Druggist of Australasia," a journal established by the proprietors of this journal, and published in Melbourne, Vic. Copies of the monthly issue can be obtained at 6d. each, post free, from the office of "The Chemist and Druggist," 42 Cannon Street, London, E.C.

Note.—"The Chemist and Druggist" is regularly supplied by order to all the members of the following, amongst other, societies:

Central Pharmaceutical Association, N.Z.
Canterbury (N.Z.) Pharmaceutical Association.
Otago Pharmaceutical Association, N.Z.
Pharmaceutical Society of New South Wales.
Pharmaceutical Society of Queensland.
Pharmaceutical Society of South Australia.
Pharmaceutical Society of Tasmania.
Pharmaceutical Society of Western Australia.

New South Wales.

DEATHS FROM SODIUM SALICYLATE are rare. A man died in Sydney recently from an overdose taken to relieve rheumatic pains. He had a weak heart, and the salicylate acted too strongly on it.

A PECULIAR CASE.—At the final examination of the Board of Pharmacy, when seven candidates out of eleven passed, a twelfth candidate was suffering from influenza and bronchitis and in consequence of this was unable to smell. He is to be allowed to go up again for recognition of specimens.

THE BRITZ CASE.—The Federal Crown Solicitor states that the decision in the case (Doan's backache-pills) only confirms the judgment of Mr. Justice Hodges in the Victorian case of *Stevens v. Abrahams*, and does not affect the prosecutions instituted by Mr. Kingston under another part of the Act.

TABLET-MEDICATION is the subject of a four-page quarto circular which the pharmacists of Sydney and suburbs have issued to the medical profession. In it they call attention particularly to the prescribing of patent and proprietary medicines, and especially to medicines in tablet form, pointing out that this leads to self-medication, which has reached astounding proportions among the general public. Examples are given in proof of this statement, and the names of more than a hundred pharmacists are attached to the circular.

New Zealand.

PHARMACEUTICAL RECIPROCITY.—At the July meeting of the Otago Pharmaceutical Association Mr. W. Wardrop, a Past-President, gave an address on this subject. He held that anyone who passed the examination in pharmacy should have the whole of the British dominions open to him as a field in which to practise. At the conclusion of the address resolutions were passed affirming the principle of reciprocity with Great Britain and the Colonies on the basis of recognition of certificates of registration.

Victoria.

PROSECUTION UNDER THE POISONS ACT.—At Yea on July 4, Charles Knights, storekeeper, was fined 40s. without costs, for giving false information when purchasing strychnine from Mr. James Taite for his wife, who afterwards died through taking it. When Knights visited Mr. Taite's pharmacy in company with a detective to ascertain the date of the sale of the poison, he declared that he had not signed the poison-book till confronted with his signature. The entry in the poison-book showed that he had stated that he purchased the strychnine for the destruction of mice.

P.A.T.A.—The following are the latest additions to the protected list:

Imperial aperient water, retail 1s. 3d., wholesale 10s. 6d. per dozen, 10s. per dozen for quarter-gross, 9s. 6d. per dozen for half-gross; phosphol emulsion, wholesale 16s. doz., retail 1s. 9d.; No. 1 Solomon solution, retail 2s. 6d.; No. 2, retail 5s.; No. 1 Morris's Imperial eye-ointment, retail 2s.

Alteration.—No. 1 Hendry's wattle cream, wholesale 8s.; No. 2, wholesale 16s.

There were fifty articles in the July list.—W. E. Woods & Co. have fixed a uniform wholesale tariff for their "Great Peppermint Cure" and other proprietaries. It

applies to wholesale quantities only, and is in force throughout the Commonwealth.

THE DENTAL DEFENCE ASSOCIATION formed in August, 1900, had dropped into entire quiescence until the month of June, when Messrs. A. L. Gibbs and E. W. Terry, with a few other gentlemen, decided to throw their energies into the work and endeavour to carry out the primary objects. The first of these, according to the articles of association, was to conserve and secure the rights and privileges already possessed by dentists and generally to promote the well-being and progress of the dental profession; secondly, to protect the public against the unskilful practice of dental quacks and charlatans; thirdly, to protect dentists against the unfair and illegal competition of unregistered persons, and to take all necessary proceedings incidental thereto.

THE AUSTRALASIAN OPTICAL ASSOCIATION.—On June 7 this Association was formed. Apparently about nine persons were present, and eighteen others were represented by proxy, fifteen of the proxies being held by Mr. Arthur Cocks, who acted as Hon. Secretary. The objects of the Association are (1) to federate into an organisation all branches of the optical profession of Australia and New Zealand; (2) to foster the growth and diffusion of optical knowledge generally; (3) to promote friendly intercourse among opticians; (4) to safeguard the material interests of the optical profession; (5) to elevate the standard of optical education. The constitution and by-laws were not then adopted, but have since been considered by a committee which met on June 20. Any gentleman who has been associated, either as principal or manager, with the optical trade for two years or more is eligible for ordinary membership; the annual subscription is fixed at a guinea.

Western Australia.

THE PHARMACEUTICAL COUNCIL OF WESTERN AUSTRALIA at its meeting on July 13 registered two new pharmacists. An application for registration on the Victorian diploma had to be refused as no reciprocity was in existence. Several storekeepers from the town of Broome applied for renewal of their poisons licences, but these were refused, as a registered chemist is now practising there. Licences can only be issued for businesses at a distance of not less than four miles from the nearest pharmacist's shop. The matter of reciprocity was also dealt with, and a statement had been forwarded to the other Pharmacy Boards.

PROSECUTIONS UNDER THE PHARMACY ACT.—On July 9 at the Kalgoorlie Police Court, several storekeepers were charged with selling chlorodyne in contravention of the provisions of the Act. The defendants were Messrs. F. Bricknell, Ernest Broadhurst, Stephen Beston, Matthew Jackson, William Spencer (Wills & Co.), James Sheehan, and John Henry. The Magistrate (Mr. E. P. Dowley) said it was a serious thing, as each was liable to a fine of 100l., or twelve months' imprisonment without the option of a fine. This visibly impressed the defendants, but they breathed freely when he imposed a fine of 1l. each, and 1l. 9s. 9d. costs.

PROTECTING TITLES.—At the same Court on the same day, John L. Hinde, manager of the Drug Supply Company (Limited), Kalgoorlie, was charged with a breach of the provisions of the Pharmacy Act by the use of protected titles. Mr. Randell, for the Pharmacy Board, said the proceedings were authorised by the Pharmaceutical Society of West Australia, and contended that the appearance of the word "drug" in the title of the company together with "J. L. Hinde, manager," would be likely to lead the public into the belief that the defendant was a duly qualified chemist. Mr. E. W. Mayhew, President and Registrar of the Pharmaceutical Society, gave evidence. The defendant contended that his name did not appear in the sign as manager of the shop, but as manager for the Drug Supply Company (Limited), which is registered under the Companies Act. On the date of the offence he believed that he had a duly qualified pharmaceutical chemist in his employ, but he had since discovered that such was not the case. The Magistrate imposed a fine of 2l., with 3l. 6s. 6d. costs.—Mr. H. H. Holden was fined 10s., and 1l. 5s. 6d. costs, for using the letters "M.P.S." while in the employ of J. L. Hinde, of the Drug Supply Company, Limited. The defendant pleaded guilty, stating he is registered in New South Wales and South Australia.

South African News.

(From our own Correspondents.)

Note.—THE CHEMIST AND DRUGGIST is regularly supplied by order to all the members of all the Pharmaceutical Societies in British South Africa, viz.:

SOUTH AFRICAN PHARMACEUTICAL ASSOCIATION.
PHARMACEUTICAL SOCIETY OF CAPE COLONY.
NATAL PHARMACEUTICAL SOCIETY.
TRANSVAAL PHARMACEUTICAL SOCIETY.
RHODESIA PHARMACEUTICAL SOCIETY.
NORTHERN DISTRICT CHEMISTS' ASSOCIATION.
PHARMACEUTICAL SOCIETY OF ORANGE RIVER COLONY.

Cape Colony.

A KIMBERLEY CHEMIST advertises in the local paper that he is having a sale, and for "one month only" will grant all purchasers a discount of 10 per cent.

THE INSPECTOR OF FOODS, DRUGS, AND SEEDS is busy collecting samples of iron pills from various parts of the Colony. He has been more than energetic in the Cape peninsula, and a visit has been paid to nearly every drug-store. Several purchases fail to come up to the standard, and prosecutions are taking place.

THE SPIRIT-DUTIES.—The Board of Trade announce that they have received a copy of the "Cape of Good Hope Government Gazette Extraordinary" for June 20, 1904, containing Government Notice No. 640 of 1904, laying down rules and regulations under the provisions of the Additional Taxation Act, 1904, and the Excise Spirits Act, 1884.

CHARGE OF ARSON.—In connection with the fire that took place in the drug-store of Messrs. Vogelgezag & Co., Hanover Street, Cape Town, the proprietors were brought before the Magistrate on August 15, charged with arson. From the evidence given by the policeman who discovered the fire, it would appear that the portion of the store where the fire originated was saturated with kerosene oil. The New Zealand Insurance Company are the interested parties from an insurance point of view, and the manager, Mr. Frank William Wilson, stated that he visited the shop on August 8 and found the desk at the end of the counter saturated with paraffin. An empty bottle, which had contained the oil, was also shown him as found by the policeman. The accused, Robert James Hislop and his wife, were both remanded till August 22, bail being allowed.

IMPORTATION OF TINCTURES.—At a meeting of the Cape Town Chamber of Commerce on August 15, a letter was read from the London Chamber of Commerce, enclosing a memorandum drawn up by the Chemical Trade Section of that body for the consideration of the Cape Town Chamber, and asking that representations should be made to the Government on the lines suggested therein. The memorandum dealt with the new reading of the Customs tariff respecting medicinal tinctures imported into Cape Colony. While disclaiming any right or desire to interfere with the Colony's fiscal policy, the Section pointed out that the alteration in the Convention of 1898, whereby 15s. per proof gal. would be charged in future upon imported tinctures, would not bring in the increased revenue desired by the Government; that the statement made by Dr. Hoffmann in the House of Assembly, as reported in the "Cape Times" of May 11, that the Government was being robbed of 100,000*l.* or 200,000*l.* per annum, was incorrect; that the increased cost of British tinctures under the new duty would lead to the use of inferior preparations, to the detriment of public health; that since the preparations imported were British, the increased duty would exclusively injure British manufactures; that the disparity between the Excise-duty of 6s. per proof gal. and the import-duty of 15s. per proof gal. was greater than in any other British colony, or even foreign country; that if the Excise and import duties were made the same, or approximately the same, the revenue would unquestionably be increased in the manner desired by the Cape Government. The letter was referred to the Management Committee, with the suggestion that a copy be forwarded to the Treasurer-General.

A CHEMISTS' CONCERT.—On August 15, a concert was held in Cape Town, organised by the Amalgamated Chemists of Cape Town and suburbs, and by permission

of the commanding officer and officers of C.G.A., D.E.O.V.R., and combined Volunteer bands. The hall was well filled, and a substantial amount will be handed over to the widow of a quartermaster-sergeant, for whom the concert was promoted. The programme was a long one, and good talent was the order of the evening, encores being numerous and well-deserved. It is hoped, says the "Cape Argus," in its account of the concert, that chemists and druggists will carefully consider the idea of co-operating, and endeavour to establish a society whereby their interests, socially and financially, could be considered. Cape Town, being the base of South Africa, should have some hostel where an unfortunate craftsman could look for assistance in absolute need of the same.

SULPHUR-SPRINGS have been discovered at Deaufort West, and a syndicate has been formed for the purpose of establishing a sanatorium. In the course of his analytical report on the water, Dr. Hahn states that it contains a larger amount of sulphuretted hydrogen than any other known mineral water in South Africa, and it contains such efficacious saline ingredients as place it in line with the famous sulphur-springs of Europe—viz., Aix-la-Chapelle and Bertscheid in Germany, Herculesbad in Hungary, and Aix-les-Bains, and the sulphur-springs Baresges, Amelie-les-Bains, and the Eaux Bonnes in Southern France, north of the Pyrenes. This water resembles, however, most closely the water of Aix-la-Chapelle, and its use is indicated in all those ailments in which the use of the waters of Aix-la-Chapelle is recommended.

Natal.

THE CUSTOMS RETURNS for methylated spirit show that 4,122 proof gals. was manufactured. To warehouses, for consumption in Natal, 644 proof gals.; to distilleries, for consumption in Natal, 4,284 proof gals.; for export over the border, 2,062 proof gals.

THE NAVAL, MILITARY, AND CIVIL SUPPLY STORES, Smith Street, Durban, have opened a pharmacy in connection with their business. The fittings, which are up-to-date and of superior quality, are supplied by Messrs. Lynch & Co. (Limited), London. This department is under the personal supervision of Mr. Williams, who has had experience in the South African trade, and who is an old assistant of Messrs. Savory & Moore, London.

CAMPHORATED-OIL PROSECUTION.—During the past month the Durban Corporation officials have been actively putting into force the Adulteration of Food and Drugs Act, with a view to testing the standard of drugs in the town. As a result, the manager of the Durban branch of Lennon (Limited) was charged in the Magistrate's court with having contravened Section 7 of the Act by selling camphorated oil adulterated with cotton-seed oil. The solicitor for the defence entered a plea of guilty, contending, however, that according to the law of Natal his client could have proved a plea of not guilty, as the invoice showed that the oil had been imported as olive oil, and had been used and supplied without knowledge of its impurity. The Magistrate, in giving judgment, said that as it was the first offence, the defendant would be discharged with a caution.

Transvaal.

MR. RIVE, of Messrs. Smith, Rive & Co., chemists, Johannesburg, and Mr. James Donaldson, of Middelburg, have recently returned from England.

DRUGS AND CHEMICALS to the value of 177,000*l.* were imported into the Transvaal during the five months ended May, 1904, against 250,000*l.* for the corresponding period of 1903.

THE BOARD OF TRADE have received from Johannesburg copies of Supplements 1, 2, and 3 to the Customs Tariff, giving Customs decisions regulating the rates of duty leviable on various articles imported into the Transvaal. The decisions mention that disinfectants are free of duty. These include carbolic acid (excepting pure crystals), corrosive sublimate, Condy's fluid, solution of potassium permanganate, chloride of lime, bleaching-powder (containing not less than 33 per cent. of chlorine), izal, chinosol, sanitas, lysol, Jeyes' fluid, Quibell's disinfectant, and

formalin. On perfumed spirits (under 3 per cent. proof spirit) a duty of 25 per cent. *ad valorem* has to be paid.

PHARMACY BOARD ELECTION.—As soon as the Medical and Pharmacy Ordinance was gazetted on August 12, steps were taken for the election of three chemists as members of the Pharmacy Board. The Lieutenant Governor has power to appoint two members, and he will probably select chemists who are not in Johannesburg, because chemists on the Rand intended to elect three of themselves. For the Government appointments Mr. J. R. Jones, of Pretoria, and Mr. B. O. Jones, of Boksburg, have been mentioned, but the Lieutenant-Governor had not up to August 15 communicated with the Pharmaceutical Society in regard to his nominees. For election by chemists' votes Messrs. Robert Eutters, L. Thomas, and A. S. Smith stand a good chance. Mr. J. H. Dinwoodie and Mr. W. B. Rawlinson have also been mentioned as candidates. The Jews in the trade think that one of them should be elected, but the matter is really to be determined by pharmaceutical fitness, and not by nationality or religion.

American Notes.

(From a Special Correspondent.)

A SET-BACK.—One of the three anti-trading-stamp laws enacted in the various States during the past year has been declared unconstitutional. The New York statute is the one to receive this blow. Druggists and other merchants regret this exceedingly. They are anxious to wipe out the trading-stamp nuisance.

UNQUALIFIED ASSISTANTS IN CHARGE.—The Pennsylvania Board of Pharmacy is preparing to prosecute those druggists among them who do not obey the law. A number of Philadelphia pharmacists, it seems, have been in the habit of leaving their stores for indefinite periods in the charge of unqualified men. The Board will prosecute a number of such offenders.

CONSISTENCY.—An ex-mayor in Boston, now a druggist, has recently been prosecuted for the illegal sale of liquor. This fact is interesting when it is stated that the good man, while acting in the capacity of mayor, refused to sign druggists' licences which the local Board of Aldermen had voted to grant because he felt it wrong for the pharmacists to sell liquor under any conditions. The jewel of consistency does not often appear on some men's breasts.

ANTI-N.A.R.D.—The operations of the N.A.R.D. have been somewhat interfered with in Philadelphia and Baltimore by the development of an action for damages in each city. Two large cutters have sued the local wholesalers and retailers for refusing to sell them goods under the operations of the tripartite plan. Damages of \$25,000 and \$100,000 are claimed respectively. The enforcement of the N.A.R.D. plans to prevent cutting is no picnic!

NO FREE CANDY.—A novel action has recently been decided in Chicago. The Court rendered a decision that a drug-clerk may not "help himself" to candy, cigars, soda-water, and other things in the store. A certain druggist found that his assistant was doing that very thing; the clerk insisted that he had a right to do so, and the parties went to law about it. The lower Court decided in favour of the clerk, but the upper Court reversed the decision.

ALCOHOLIC PROPRIETARIES.—Recently the chemists of the State of Georgia came very near having themselves saddled with a law which would practically have wiped out the sale of certain patent medicines. It provided that all proprietary medicines containing more than a stipulated percentage of alcohol should be deemed liquors, and should be sold only by those druggists who took out a liquor-licence costing \$200 annually. The druggists got together and "killed" the Bill.

A DEGREE NECESSARY.—The "pre-requisite law" of New York State, providing for the possession of a pharmaceutical degree by every applicant for registration as a pharmacist, comes into effect on January 1, 1905. There is great skirmishing on the part of unqualified assistants to pass the State examination before this period arrives, in order that they may escape the necessity of going through the college first. Every examination is crowded with applicants, and the Board of Pharmacy has found it necessary to provide for extra examinations.

COMMERCIAL PROFESSIONALISM.—Dr. W. C. Alpers, who has been recognised for many years as one of the leading scientific and professional pharmacists in the country, has recently enlarged his New York establishment very greatly, and taken in such commercial features as a soda-fountain, a cigar-case, and the like. This action has provoked the query "Does professional pharmacy pay?" Dr. Alpers replies that it does pay, but that he was anxious to do a larger volume of business and to expand in sympathy with the industrial tendency of the age.

A COUNTER-GRABBER.—The United States has its fair share of swindlers, and it seems as if druggists were very frequently chosen as victims by this class of citizens. A clever Chicago individual has recently worked the game of presenting a prescription to the druggist asking for some mixture manifestly intended for immediate and pressing use, and then requesting that it be put up instantly in order to appease the anguish of a suffering wife. As soon as the dispenser disappears behind the prescription-case, the fellow grabs things that are in sight and walks down the street.

INDUCEMENTS.—The National Association of Retail Druggists has experienced the same difficulty that the P.A.T.A. has had to contend with. It has found it impossible to get all the druggists in the country within the fold, and of course its power has been limited by the extent that druggists stayed outside of the organisation. The N.A.R.D. now proposes at the coming St. Louis convention to arrange to have manufacturers grant members of the organisation special prices, thus causing non-members to get in line in order that they may not lose substantial benefits.

S.C.I. AND A.P.A.—Great preparations are being made in New York City for the annual meeting of the Society of Chemical Industry. Invitations have been received from a great many local industries to entertain the members and show them their manufacturing establishments. Then, too, the trip which the Society is to make throughout the States will enable the members to see all the leading factories and industries in the country. It is a source of regret on the part of a good many pharmacists that the annual meeting of the Society will be held in New York concurrently with the meeting of the American Pharmaceutical Association in Kansas City.

THE NEW U.S. PHARMACOPOEIA.—The Board of Trustees of the United States Pharmacopoeial Convention have decided to disclaim all responsibility for the alternate weights and measures, and for the statement of strength of official preparations in commentaries, in the forthcoming edition of the United States Pharmacopoeia. The contract for printing the book has been given to the J. B. Lippincott Company, of Philadelphia, and the contract for the agency for sale and general distribution will be awarded during this month. The Pharmacopoeia is to be placed on the market in at least six styles. It will be obtainable either bound in mu-lin (\$2.50), sheepskin (\$3), flexible leather (\$3.50), inter-leaved, sheepskin (\$4.00), printed on one side, sheepskin (\$4.00), or printed on one side, unbound (\$3.50). The date on which the new revision comes into effect will be fixed as near as possible to ninety days after the first publication of the book. Professor Jose G. Diaz, of the University of Havana, having suggested to the Board that a Spanish edition of the Pharmacopoeia should be issued, the President of the Convention (Dr. H. C. Wood) has had a conference with the Government authorities at Washington, and is in correspondence with the insular Government authorities at Manila, with the object of ascertaining the extent to which a Spanish edition would be likely to be used. The Board of Trustees are to hold an informal meeting at Kansas City during the sitting of the American Pharmaceutical Association Convention this week.

PATENTS.—Messrs. Edward Evans & Co., chartered patent agents, 27 Chancery Lane, W.C., write to draw public attention to the fact that Section I. of the Patents Act, 1902, is, by an Order of the Board of Trade just published, to be brought into operation on January 1 next, so that on and after that date all applications for English patents upon which a complete specification has been filed will be examined to ascertain whether the invention the subject-matter of the application has been wholly or in part claimed or described in the specification of any prior English patent granted for fifty years next before the date of the application.

Colonial and Foreign News.

THE MEDICAL STUDENTS IN SWITZERLAND last winter numbered 1,654, of whom 763 were men and 891 women.

KILLED AT HIS WORK.—The "Novoe Vremya" states that while making up a preparation, a young pharmacist was killed on the spot by an explosion in the Valentynovitch pharmacy at the village of Konstantinovsk.

REGAL HONOUR TO PHARMACISTS.—The "Bollettino (Chimico Farmaceutico)" states that the King of Italy has conferred the Order of Knight of the Crown of Italy on two military pharmacists, Carlo Martinotti and Giuseppe Castellini, for distinguished services at the Central Military Pharmacy in respect to the treatment of quinine.

THE SACCHARIN CAMPAIGN.—In a little factory kept by Timothy Sakimatova in St. Petersburg, the police doctor found some samples of quass, a Russian drink, in which there were discovered traces of saccharin. Timothy had to pay a fine of 30s.—In the room occupied by Abraam Rosenfeld, in Odessa, the police discovered a large quantity of saccharin, worth 100*l.* The owner explained that he got it from the local representative of a Dresden firm on account of a debt due to him.

DUTY ON PHOSPHORUS.—The Board of Trade are in receipt of a copy of a despatch from H.M. Minister at Montevideo, reporting that amorphous phosphorus, which has hitherto been classified for tariff purposes as a drug, dutiable at the rate of 48 per cent. on an official valuation of 2 pesos per kilo., is henceforth to be dutiable at the rate of 8 per cent., the same rate as for phosphorus in sticks. Mr. Baring adds that the additional duties of 5 per cent. and 3 per cent. will continue to be payable on amorphous phosphorus.

CONGRESS OF CHEMISTRY.—The Liège Pharmaceutical Society and the Belgian Chemical Society have decided to hold a congress of chemistry and pharmacy at the end of July, 1905, at Liège, on the occasion of the Liège Universal Exhibition. The first debate at the congress will be on questions to be submitted to the International Congress which is to be held at Rome in 1906. The Secretaries of the Congress are M. J. Raymond, pharmacien, 16 place des Carmes, Liège, and M. J. Wauters, chimiste, 83 rue Souveraine, Brussels.

THE USES OF ADVERTISEMENT.—A French consular report quotes the development of the perfumery-trade in Roumania as an example of how much can be gained by continuous advertising. Formerly Roumanians used only French perfumes, soaps, powders, etc., but Germans have during the last ten years, by advertising in every possible manner, and by drawing special attention to the technical advances in the German perfumery-trade, made such inroads on the business that they supply about 80 per cent. of the perfumery consumed in Roumania.

THE RETAILERS AND WHOLESALERS OF CANADA have come to an agreement (see p. 473) to sell all patent medicines under a direct-contract and serial-numbering plan at full prices. If the patent-medicine proprietors do not accede to the arrangement, these two branches of the trade propose to stand together in their insistence upon it. The direct-contract plan is the one which the druggists of the United States have been talking about for some years, and which they propose to have adopted at the coming St. Louis convention of the N.A.R.D., if the step can possibly be taken.

DEUTSCHER APOTHEKER-VEREIN.—At the annual meeting at Hamburg this year (see *C. & D.*, September 3, page 438), writes a German correspondent, there were about seven hundred members present—probably the largest attendance on record. The resolutions passed were of a decidedly practical character, and the general tone of the meeting was a demand for a better position of German pharmacy, based on sounder foundations than prevail at present. The meeting expressed regret at the fact that pharmacognosy is neglected at the German Universities, and empowered the President to take steps to induce the Governments of the different German States to appoint special chairs for pharmacognosy at all Universities, to be filled by teachers who have been connected with pharmacy.

Trade Notes.

HOW A LITTLE PARAGRAPH has become a smart advertisement may be judged by turning to Messrs. Southall Brothers & Barclay's announcement in this issue.

SINEXTONE is the name of a new veterinary astringent tonic for relaxed muscles, etc., which has been introduced by Messrs. Bird & Storey, 42 Castle Street East, Oxford Street, London, W.

MESSRS. H. P. THOMPSON & Co., 93 Aldersgate Street, E.C., have been appointed the London agents to the Liverpool Lint Company. They will carry a complete stock in London of all the company's manufactures, and will send samples and quotations to wholesale and export buyers.

NEWBURY'S ANNUAL CATALOGUES.—We had the opportunity in our Summer Issue of commenting on an advance copy of the 1904 issue of the catalogue of druggists' sundries, proprietary medicines, etc., published by Messrs. F. Newbery & Sons (Limited), Charterhouse Street, London, E.C. The catalogue is now ready for distribution. There are 556 pages in it, including the cover, and it is a requisite for every chemist's shop book-shelf. Copies can be obtained on application at the above address.

ALLENBURY PASTILLES.—The manufacture of pastilles has been an important and ever-increasing adjunct of the business of Messrs. Allen & Hanburys (Limited), Bethnal Green, E., for many years. They have a special series of throat-pastilles, several of which have been recently submitted to us, and all are well made with a special pâte de jujube basis which is not too soft, and which makes more certain the slow solution of the jujube in the saliva and the application of the medicinal remedies with which it is incorporated. The pastilles are protected against atmospheric action, and will keep in any climate. The most recent combinations are of menthol, cocaine, and red gum; eucalyptus and red gum; guaiacum, chlorate of potash, and red gum; and rhatany and cocaine. The pastilles are put up in chastely decorated tins, with a "full disclosure of the principal ingredients" on each label.

"THE EUCALYPTUS SEASON" is the happy expression which the Tasmanian Eucalyptus Company (Limited), 138 Leadenhall Street, London, E.C., employ to indicate that now is the time to see how stocks of eucalyptus products stand. The company started business here with the "Platypus" brand of eucalyptus oil (which, by the way, is now by request exhibited at the Imperial Institute), and from that good basis evolved a number of saleable and useful specialties. Their new wholesale price-list mentions, besides the "Platypus" and "Royal" brands of oils, four other kinds of oil and eucalyptol. They have series of crystallised and clear gum pastilles with "Platypus" oil as the chief medicament, also cachous and the new ivorine inhaler—a tiny vest-pocket tube which retails at 6*d.* and is put up in sixes on an attractive showcard. All the company's products are now put up in packets ready for retailing, but can be had in bulk as well. The price-list gives all particulars, and can be obtained on application at the above address.

MILK IN BOXES.—The employment of "dry" milk is becoming a popular factor in infant-feeding. By means of the Just-Hatmaker process it has been found possible to deprive milk of its water without depreciating its nutritive qualities. The milk as it comes from the cow is passed rapidly over highly heated cylinders. It is thus deprived almost instantaneously of its water, and reduced to a dry powder; moreover, the high heat kills any germs or spores that may be present. This powdered milk, being sterile and easily digested, is an ideal food for infants, and with the addition of a little milk sugar and hot water it forms what has been proved to be a nutritious food. This dry milk is manufactured from pure English milk by the West Surrey Central Dairy Company, of Guildford, under licence from the patentees. It is put up in neat cartons, each holding sufficient to make three to four quarts of milk. There are three qualities—separated milk (containing about 1 per cent. of fat), half-cream milk, and full-cream milk. This is a line that chemists might stock with advantage. It is put on the market as "Dry English Milk, 'Cow and Gates' Brand."

Legal Reports.

Farmer v. Glyn-Jones.

SUBJOINED is the official statement of this case contained in the report of the Commissioners of Inland Revenue, published this week. We reprint it here as a useful record.

Medicine Stamp-duty—Exemption in respect of well-known, admitted, and approved remedies sold by surgeons, etc., who have served an apprenticeship (52 Geo. III., e. 150 and schedule).

The respondent, a chemist who had served a regular apprenticeship, sold unstamped a bottle of ammoniated tincture of quinine with a label as follows:

AMMONIATED
TINCTURE OF QUININE, B.P.

*A well-known and highly recommended remedy
for*
INFLUENZA AND COLDS.

Dose.—One teaspoonful in water every four hours
until relieved.

GLYN & Co., Chemists,
15A East India Road, E.

The medicine had been purchased by him from manufacturing chemists without any label recommending the medicine. An information was exhibited against him for recovery of the penalty imposed by Section 2 of the Medicine-stamp Act, 1812 (52 Geo. III., e. 150), for selling the preparation unstamped.

The Magistrate dismissed the information on the ground that the respondent was not the owner, proprietor, or original or first vendor of the ammoniated tincture of quinine in question within the meaning of the special exemption contained in the schedule to 52 Geo. III., e. 150, and that he was within the exemption.

Upon a special case stated by the Magistrate, it was held by the King's Bench Division (Lord Alverstone, C.J., and Wills and Channell, JJ.), on the 24th April, 1903, that the decision of the Magistrate was right.

The case is reported in [1903] 2 K.B. 6.

Sale of Food and Drugs Acts.

GREGORY'S POWDER.

At Bingley on September 2, Arthur Hoyle, chemist, Main Street, was summoned for selling Gregory's powder which was found, on analysis, to contain one-third of rhubarb and ginger and two-thirds of magnesium carbonate. For the defence it was stated that the defendant purchased the powder from one of the best wholesale houses in the North. It was a perishable drug, and the analyst should have stated that fact in his report. The best experts in the country stated that there was no material difference in the medicinal value of magnesia and carbonate of magnesia. The Bench thought there had been no wilful intention to deceive the public. Technically the defendant had broken the law, and a fine of 1s. and costs would be imposed.

COMPOUND DECOCTION OF ALOES.

At the Bournemouth Police Court on September 1, Frank H. Gordelier, chemist and druggist, Parkwood Road, Boscombe, was summoned for having sold a compound decoction of aloes to the prejudice of the purchaser.

Mr. T. E. Rodgers, of the Town Clerk's office, who prosecuted, said the evidence would show that the food and drugs inspector sent a prescription to the defendant's shop, purporting to be made out by a medical man, for compound decoction of aloes B.P. On being analysed by the borough analyst, the decoction supplied was found to be deficient in alcohol to the extent of 66 per cent., and there was also a 10 per cent. deficiency of extractive. The case, proceeded Mr. Rodgers, was one similar to a series of cases before the Court about two months previously, and there was no objection on the part of the prosecution to the same course being adopted as on that occasion, when the Bench found that an offence had been committed but, inasmuch as they were the first prosecutions, dismissed the cases on payment of costs.

Mr. H. Trevanion, who represented the defendant, admitted the sale of the article and the accuracy of the analyst's certificate, but said his client considered that the British Pharmacopœia did not lay down the standard for that particular article. They admitted that it laid down the process which ought to be strictly followed out in preparation of the decoction, but held that it did not lay down the standard of strength at which all the component parts of the ingredients should be found when the article was manufactured. The British Pharmacopœia for 1898 set out in detail the different ingredients that go to make up compound decoction of aloes, but it did not at the bottom contain the note or test set out at the foot of several other preparations, which showed, when the article was ready for sale, what standard of strength the component parts ought to come up to.

Mr. Rodgers contended that in the B.P. they had got the standard because the quantities were specifically stated; and the relationship of those quantities one to another, especially referred to in percentages, constituted a standard. The Bench overruled Mr. Trevanion's objection.

Mr. Trevanion then submitted reasons for mitigation of the penalty, and the Bench thought it sufficient to order payment of costs and dismiss the information.

FALSE WARRANTY.

At Accrington on September 7, George Whewell, vinegar-manufacturer, Blackburn, was fined 5l. and costs for giving a false warranty with vinegar he sold to customers, by guaranteeing the vinegar to be "commercial malt vinegar," although it was in reality acetic acid diluted with water.

PEPSIN.

At Lambeth Police Court on Thursday, September 8, before Mr. Hopkins, John Brown, pharmaceutical chemist, 86 Queen's Road, Peckham, and Albert Pellew, chemist and druggist, 374 Old Kent Road, S.E., were summoned for selling pepsin that was 60 per cent. deficient in the dissolving power required by the British Pharmacopœia.

Mr. G. W. Marsden, solicitor, prosecuted for the borough of Camberwell and Mr. C. H. Kirby (of Neve, Beek & Kirby) defended on behalf of the Chemists' Defence Association.

A woman gave evidence that, acting on the instructions of Mr. Groom, inspector under the Sale of Food and Drugs Acts, she went to Mr. Brown's shop and asked for $\frac{1}{4}$ oz. of pepsin. She was supplied with a powder in a small box, for which she paid 9d. In cross-examination by Mr. Kirby she admitted that Mr. Brown said there were several kinds of pepsin, and asked her what price she had previously paid.

In the course of his evidence Inspector Groom said Mr. Brown showed him the bottle from which the pepsin was taken. It was labelled "Pepsina porci solubilis." He asked defendant if he was sure it was pure pepsin. Defendant replied that he believed it to be quite pure. He had obtained it from Messrs. Allen & Hanburys (Limited), in whose employment he had been for several years before starting in business for himself.

Dr. Frank Teed, public analyst for the borough of Camberwell, deposed to examining the sample purchased, which was delivered to him as pepsin. He found on analysis that it was 60 per cent. deficient in the solvent strength required by the British Pharmacopœia.

Mr. Kirby, for the defence, said the preparation sold was one of several kinds of pepsin. The reason that the soluble pepsin was sold was because defendant, being accustomed to sell that article while an assistant with Messrs. Allen & Hanburys (Limited), continued to sell the same preparation when he went into business on his own account. The pepsin sold was perfectly genuine, and, curiously enough, the defendant in the other case, Mr. Pellew, sold exactly the same preparation. Pepsin had been manufactured and sold for twenty or thirty years, but when first introduced it was not in the Pharmacopœia. In the 1885 Pharmacopœia the solvent power of pepsin was much less than is now required. Both these defendants, having set up in business after the 1885 Pharmacopœia had been issued, used the strength there required for their sales. When the 1898 Pharmacopœia came out, requiring pepsin of a much higher dissolving power to be sold, these defendants had not their attention called to

the change, and continued selling the old standard. There was no dishonest intention, as was shown by the fact that Mr. Brown charged 9d. for an article which cost him 6½d. He could not have sold B.P. pepsin at 9d., seeing it was quoted at 3s. per oz. in Allen & Hanburys' list. Moreover, he contended, pepsin is a generic name, and is an article of commerce. He then quoted "Dickens v. Randerson," with the object of showing that while the purchaser is *prima facie* entitled to the B.P. article when a compound is required, the B.P. is not a standard for a simple natural substance like pepsin. Pepsin being a generic name, it devolves upon the purchaser to state precisely what particular kind of pepsin he wants. Pepsin is not like milk or butter, and chemists ought not to be judged by the same standard as traders who sell substances such as these, for which there is a definite standard.

Mr. Hopkins: It is a great pity that in these cases motive is sometimes mixed with fact. I always judge the merits from the broad facts before me. Now, the British Pharmacopœia says that pepsin should be of a certain strength. This article you sold is of another strength.

Mr. Kirby: I do not think the purchaser can complain if he asks for pepsin and gets it.

Mr. Hopkins: Surely he may always complain if he does not always get what the Pharmacopœia says is pepsin.

Mr. Kirby: But this is pepsin. The analyst agrees that ours is pepsin.

Mr. Hopkins: Yes, it is *a* pepsin, but not *the* pepsin.

Mr. Kirby submitted that when the purchaser asks for pepsin and pepsin is supplied, he is supplied with an article of the nature, substance, and quality demanded; but the Magistrate would not agree, saying he was bound by the facts.

Mr. Brown having given evidence,

Mr. Ralph Dodd, F.C.S., pharmaceutical chemist, one of the directors of Messrs. Allen & Hanburys (Limited), deposed to his company having sold to defendant the soluble pepsin in dispute. It has been manufactured in that form by Messrs. Allen & Hanburys for nearly thirty years, and many preferred it to the B.P. pepsin.

In cross-examination Mr. Dodd said the soluble pepsin is mixed with sugar of milk, which reduces the strength, and the idea of still preparing it in that form was to make it the same standard as it was when originally introduced.

Mr. Hopkins said in that case there was no suggestion of fraud or dishonesty against anybody: it was only a question of custom. If the purpose of the case was to bring to the notice of chemists and druggists the fact that pepsin must not be sold unless it is of the strength of the British Pharmacopœia, then that good purpose had been fulfilled. He inflicted a nominal penalty of 5s. and 1l. 11s. 6d. costs in each case.

Bankruptcies and Failures.

Re HENRY RICHARD DUNCAN, 43 Tontine Street, Folkestone, Kent, chemist and druggist.—The statement of affairs filed shows gross liabilities amounting to 996l. 3s. 4d., of which 990l. 6s. 4d. is expected to rank for dividend, and net assets 321l. 10s. 1d. It appears from the Official Receiver's report that the receiving order was made on a creditor's petition, the act of bankruptcy being the non-compliance with the requirements of a bankruptcy notice. The debtor began trading as a chemist at his present address. The business was purchased for 650l., of which 325l. was paid down, the payment of the balance being extended over a period of two years. Of this sum 200l. is outstanding. The 325l. paid on account of the purchase-money is stated to have been borrowed by the debtor from his father, and a sum of 300l. is still owing. Of the debts scheduled, upwards of 695l. is stated to be for money lent and interest. The remainder of the debts have been contracted for goods supplied to the business. In February last the debtor executed a deed of assignment for the benefit of his creditors, and Mr. Coghlan, of 16 Deansgate, Manchester, was appointed trustee. The debtor states that the trustee has not taken any steps to realise the estate, but that since the execution of the deed he has remained in possession of the stock and effects, and has carried on the business without supervision by the trustee. The debtor holds a lease of the premises, 43 Tontine Street, Folkestone, for twenty-one years,

from 1897, at a rent of 65l. per annum. The lease is deposited with a creditor. The debtor admits that he has not been in a position to pay his debts since he began business. The books kept by the debtor consist of cash-book, bought and sold ledgers, and day and dispensing books. The alleged causes of failure by debtor are "excessive price paid for the business, two bad seasons at Folkestone, and insufficient capital." The first meeting of creditors was held at 68 Castle Street, Canterbury, on September 3, under the chairmanship of Mr. T. Easton for the Official Receiver. Mr. Harry Howell Barton, of Sandgate Road, Folkestone, auctioneer, was appointed trustee of the estate, with the following committee of inspection: Arthur Hall King, Folkestone, chemist; Henry Russell Martingell, Christchurch Row, Folkestone, gentleman; Hilder Strange (of Burley & Strange), 13 Tontine Street, Folkestone, ironmonger. The following are creditors:

	£	s.	d.
Barron, Harveys & Co., London	...	10	19 5
Bourne, Johnson & Latimer, London	...	14	0 0
Butcher, Brothers, London	...	16	0 0
Duncan, R., Madeley	...	300	0 0
Evans Sons Lescher & Webb (Limited), London	...	90	0 0
Houghtons (Limited), London	...	20	0 0
Imperial Company, Cricklewood	...	18	0 0
Martingell, H. R., Folkestone	...	220	0 0
Sanger & Sons, London	...	30	0 0
Thomas, B. S., London	...	76	0 0
Kodak Company, London	...	12	0 0
Bankers' Claims	...	99	7 3

Re JAMES HULLAND, Market Hill, Framlingham, Suffolk, chemist and druggist.—The debtor has filed accounts showing gross liabilities 1,387l. 5s. 10d., of which 1,362l. 5s. 10d. is due to unsecured creditors, against net assets estimated to produce 20l. The assets disclosed consist of cash deposited with solicitor for costs of petition, 10l.; stock-in-trade, 2l.; trade utensils, fixtures, etc., 10l.; furniture, 20l.; book-debts, 3l.—making a total of 45l.—and deducting 25l. for preferential claims, there is a deficiency of 1,342l. 5s. 10d. According to the Official Receiver's observations, the debtor's effects having been seized by the Sheriff, debtor filed his petition in bankruptcy. As the Sheriff had advertised a sale, the Official Receiver allowed it to take place on the understanding that the proceeds, after deducting half a year's rent due to the landlord, and the Sheriff's charges, should be paid to him (the Official Receiver), and he expects to receive about 26l. from that source. The debtor, it appears, has been at Framlingham about seventeen years, and commenced business without capital. He admits that although he has kept no cash-book and no proper account of his dealings with creditors, he has known for some time that he was insolvent, and he attributes his deficiency to the fact that his expenses have been exceeding his profits for several years. In his deficiency account he has entered, after the heading of "other losses and expenses," "General falling-off in trade and want of capital, pressure of creditors, and legal expenses." There are creditors for large sums for money lent, and the landlord also appears as an unsecured creditor for 87l. arrears of rent.

Deeds of Arrangement.

Coleman, Edward James, 48 St. Mary Street, Cardiff, 2 Stanwell Road, Penarth, and 74 Llandaff Road, Cardiff, chemist and bookseller. Trustee, Reginald Harrison, 2 West Bute Street, Cardiff, chartered accountant. Dated August 22; filed August 29. Secured creditors, 2,914l.; liabilities unsecured, 1,674l. 19s. 7d.; estimated net assets, 120l. The following are scheduled as creditors:

	£	s.	d.
Bala College (Trustees of), Bangor	...	80	0 0
Barclay & Sons (Limited), London	...	145	0 0
Barron, Harveys & Co., London	...	42	0 0
Cardiff Corporation	...	32	0 0
Coleman, O., Cardiff	...	72	0 0
Coleman, T. H., Kingston	...	162	0 0
Coleman, Mrs. C., Kingston	...	121	0 0
Coleman, Miss, Cardiff	...	100	0 0
Evans Sons Lescher & Webb (Limited), London	...	24	0 0
Field, J. C. & J. (Limited), London	...	11	0 0
Herbert, —, Rummy	...	380	0 0
Maw, S., Son & Sons, London	...	15	0 0
Preston's Liverpool Distillery Company (Limited), Liverpool	...	13	0 0
Swansea Finance Company, Swansea	...	100	0 0
Walters, Mrs.	...	2,050	0 0
Warrick Brothers, London	...	14	0 0
Bankers' Claims	...	1,001	0 0

Bustard, Francis Edwin, 173 and 239 St. Ann's Road, South Tottenham, chemist and wine-merchant. Trustee, Oscar Berry, Monument House, Monument Square, E.C. chartered accountant. Dated August 29; filed September 5. Liabilities unsecured, 441*l.* 18*s.* 9*d.*; estimated net assets, 222*l.* 11*s.* 6*d.* The following are creditors:

	£	s.	d.
Blenkins, —, London ...	10	0	0
Crusha & Son, Tottenham ...	14	0	0
Edwards, —, London ...	57	0	0
Fentiman, —, London ...	13	0	0
Lorimer & Co., London ...	25	0	0
Nutt, Miss ...	90	0	0
Sanger & Co., London ...	10	0	0
Silverbrook, —, London ...	15	0	0
Stone, C., London ...	70	0	0
Wilkinson, —, Manchester ...	11	0	0

Gazette.

Partnerships Dissolved.

Allan, William, and **Allan, R. B. Carruthers**, trading as William Allan & Sons, Dumfries, chemists and Druggists; as far as regards R. B. C. Allan.

Eastwick-Field, C., and **Peters, A. E. D. R.**, under the style of Eastwick-Field & Peters, Midhurst, physicians and surgeons.

New Companies & Company News.

W. G. SYNDICATE (LIMITED).—Capital 3,000*l.*, in 1*l.* shares. Takes power to trade as makers and vendors of embrocations and chemical and other substances.

LONDON SPONGE AND CHAMOIS LEATHER COMPANY (LIMITED).—Capital 5,000*l.*, in 1*l.* shares. Objects: To acquire the business carried on by J. Cresswell at St. Michael's House, Basinghall Street, E.C., and to carry it on.

DANYSZ VIRUS (LIMITED).—Capital 5,000*l.*, in 4,000 preference shares of 1*l.* each and 20,000 ordinary shares of 1*s.* each. Objects: To deal in, manufacture, sell, exploit, and apply bacteriological, chemical, and other products of all kinds, and to carry on the business of chemists, druggists, manufacturers of proprietary articles, manufacturers of scientific apparatus, etc. The first subscribers are: J. G. Haller, 52 Leadenhall Street, E.C., merchant; I. Magnus, 52 Leadenhall Street, E.C., merchant; P. Haller, 18 Woburn Place, W.C., merchant; G. W. Phillips, Briardene, Deptford Park, S.E., clerk; F. J. A. Leggett, 16 King William Street, E.C., solicitor; F. Skinner, 4 Lydon Road, Clapham Common, S.W., clerk; and H. E. Sparks, 12 Mitre Street, E.C., merchant. No initial public issue. The subscribers are to appoint the first directors. Qualification, 500 preference or ordinary shares. Registered office, 52 Leadenhall Street, E.C.

LIVERPOOL CHEMICAL COMPANY.—The Court of Chancery has appointed Mr. T. S. Sheard, 13 Harrington Street, Liverpool, to be receiver and manager of this company to act on behalf of the debenture-holders.

PLATOL (LIMITED).—Mr. Justice Bigham, in the Vacation Court on Wednesday, had before him a petition by Mr. H. Platts, a creditor for 7*l.*, for the compulsory winding-up of Platol (Limited). There were two unsatisfied judgments against the company, and the petition was supported by creditors for 99*l.* and shareholders to the amount of 1,500*l.* The paid-up capital was 4,000*l.* His Lordship made the order.

SALE OF SHARES.—At the Mart, Tokenhouse Yard, E.C., on August 30, the London and Paris Exchange (Limited) held their monthly sale of stocks and shares, and among the lots sold were the following: 150 6-per-cent. cumulative preference shares in A. J. White (Limited) sold for 77*l.*; 75 ordinary shares of 1*l.* each in Schweppes (Limited) sold for 76*l.*; 70 ordinary shares of 1*l.* each in Ilford (Limited) sold for 67*l.* 10*s.* —At Leeds on September 1, 25*s.* each was realised for 100 fully-paid 1*l.* shares in Taylor's Drug Company, and 1*l.* each for 100 fully-paid 1*l.* 6-per-cent. cumulative preference shares in the same concern.

PRICE'S PATENT CANDLE COMPANY (LIMITED).—The report for the half-year ended June 30 last states that the balance of profit in hand shown by the accounts laid before the meeting in March was 67,163*l.*, from which has been deducted dividend of 1*l.* per share paid March 12, 37,500*l.*; reserve fund, 5,000*l.*; on account of depreciation on fixed properties, 10,000*l.*; general insurance fund, 5,000*l.*—leaving a balance of 9,663*l.* The profit of the six months ended June 30 last was 32,210*l.*, from which must be deducted income-tax 1,800*l.*, leaving a balance of 30,410*l.* A dividend of 1*s.* per share is now recommended, leaving to be carried forward 11,948*l.*

Births.

HEATON.—On September 2, at 36 Meadow Bank Avenue, Sheffield, the wife of Wallace E. Heaton, pharmaceutical chemist, of a daughter.

McKENZIE.—At Collinmount, Glebe Road, Kilmarnock, N.B., the wife of James McKenzie, chemist, Singapore, Straits Settlement, of a son.

Marriages.

GOODWIN-ANDREWS.—At St. James's Church, Poole, on September 7, by the Rev. P. Lawson, vicar, Francis Arthur Goodwin, pharmaceutical chemist, 79 Mutley Plain, Plymouth, to Mabel Louise, second daughter of Mr. John Andrews, High Street, Poole.

THOMAS-WILCOCK.—At St. John's Church, Upper Holloway, on August 24, by the Rev. Henry L. Mush, J. Beynon Thomas, chemist and druggist, Holloway, to Frances Edith, younger daughter of Mr. James Willcock, accountant, Finsbury Pavement House, E.C., and 40 St. John's Villas, Holloway.

VOLANS-WESTMORELAND.—On August 29, at the Baptist Chapel, Bingley, by the Rev. J. H. Carter, John Russell Volans, chemist and druggist, Bingley, eldest son of Mr. W. J. Volans, of Sunderland, to Ada Elethia, eldest daughter of the late Mr. J. A. Westmoreland, of Shipley.

Death

BERRIDGE.—At Northampton, on August 29, Mr. Albert Edward Berridge, senior partner of the firm of Berridge Brothers, wholesale druggists and dysalters, of Albert Street, Northampton. Aged thirty-eight.

HALL.—At Weston-super-Mare, on August 24, Mr. Edwin Hall, pharmaceutical chemist, aged fifty-four.

LANE.—On September 1, at 18 Benson Road, Forest Hill, S.E., from appendicitis, Charles Henry Graham, eldest son of Mr. Charles Lane (7 Idol Lane, E.C.), aged eighteen years.

SEABER.—At 103 Palmerston Road, Southsea, on August 29, the wife of Mr. Charles William Seaber, chemist and druggist, aged twenty-seven. Much sympathy is felt with Mr. Seaber, who had only been married two years. Mrs. Seaber died from rapid consumption, and was buried on September 2 at Godalming.

SWINN.—On September 1, Mr. W. H. Swinn, for eighteen years manager of the Greenbank Chemical-works of the United Alkali Company, St. Helens, aged forty-five. Mr. Swinn served his apprenticeship with Messrs. Muspratt & Co., and was subsequently assistant manager at Messrs. Hutchinson & Co.'s chemical-works at Widnes.

TAYLOR.—At Nottingham, on August 30, Mr. Henry Taylor, chemist and druggist, aged seventy-six.

WILKES.—At Upper Clapton, on August 28, Mr. Henry Wilkes, chemist and druggist, formerly of 152 Mile End Road, aged sixty-five.

WRIGHT.—At Liverpool, on August 30, Mr. John Leonard Wright, chemist and druggist, aged forty-four.

Recent Wills.

CHURCHILL.—The will of Mr. Walter John Churchill, pharmaceutical chemist, late of 48 New Street, Birmingham, who died on August 12, has been proved by his wife, Mrs. Georgina Churchill, sole executrix, who values the estate at 2,390*l.* 8*s.* gross and 1,780*l.* 19*s.* 1*d.* net.

EDWARDS.—Under the will of the late Mr. Albert Frederick Edwards, manufacturing chemist, of Elton, 500*l.* has been bequeathed to All Saints' Church, Elton, and 100*l.* to Bury Infirmary.

TAYLOR.—The will of the late Mr. John Taylor, of Bolton, chemist and druggist and a member of the Council of the Pharmaceutical Society of Great Britain, who died on January 20, has been proved at the Manchester District Registry by his widow, Mrs. Frances Taylor, sole executrix. The gross value of the estate is 346*l.* 12*s.* 11*d.*

Scientific Progress.

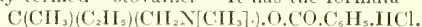
Bear's Grease.—It is hardly likely that the bear's grease of the older pharmacies would ever be mistaken for the true fat of the bear, but the latter has recently been fully examined by Raikow ("Chem. Zeit.," 1904, 272), who gives the following figures for it: Specific gravity, 0.921; melting-point of fatty acids, 30.5° to 32.5° ; acid-value, 2.2; ester-value, 192 to 198; iodine-value, 98.5 to 107.5; Reichert number, 1.1 to 1.6; refractometer-number at 40° C., 53.0.

Epinephrine.—Abel ("Berichte," 1904, 1839), after reviewing the previous researches on this interesting body, indicates a simple method of its extraction by means of exhausting the glands with absolute alcohol in the presence of a little trichloroacetic acid. The product is purified by solution in acids and precipitates with ammonia, the process being repeated several times. The empirical formula for epinephrine is $C_{10}H_{13}NO_3$. It forms crystals, which are easily benzoylated.

Crystalline Aldehyde Compounds.—Erlenmeyer and Braun ("Arch. der Pharm.," 1904, 254) have prepared crystalline condensation-products of heliotropin, cinnamic aldehyde, and furfural in the following manner: Equimolecular quantities of prussic acid and heliotropin are mixed with acetic acid, and dry hydrochloric acid is passed through the mixture. After saturation, the mass is allowed to stand for three days. The crystalline mass is dried on porous plates, treated with acetic acid, and then with alcohol. By crystallisation from absolute alcohol the separate condensation-products were obtained, one melting at 208° and the other at 205° . They both appear to be complex lactones. The corresponding compound with cinnamic aldehyde is a lactone of the formula $C_{11}H_{11}.CH:CH:C_{10}H_7O_2$, melting at 179° .

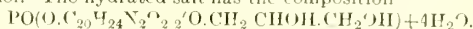
Methyl Anthranilate.—Freundler publishes a paper ("Bull. Soc. Chim. de Paris," 1904, 882) on this compound, which has of late years come into some prominence on account of its discovery in neroli oil and then in most of the oils of the *Citrus* family. He finds that methyl anthranilate readily forms a crystalline picrate when warm alcoholic solutions of the two compounds are mixed. The crystals melt at 104° , and have the composition $C_{14}H_{12}N_2O_6$. It is, however, too soluble to lend itself readily to the detection of the ester. A certain method of identification consists in extracting the ester in the usual way from an essential oil by means of hydrochloric acid, rendering alkaline with carbonate of soda, extracting with ether, evaporating the ether, and treating the residue with phenyl isocyanate in excess; a thioquinazoline, almost insoluble in boiling alcohol, subliming at 160° to 170° and melting at near 300° , is then formed. The author states that this allows a quantitative determination to be made which is within 2 per cent. of the actual value.

A New Anæsthetic.—Fournéau ("Jour. de Pharmacie et de Chimie," 1904, II., 108) describes a new anæsthetic under the name "stovaine," this being one of a new series of bodies possessing powerful anæsthetic properties, which consist of the esters of certain tertiary amido-alcohols. Of these the most interesting is the benzoic ester of ethyl-dimethyl-aminopropinol, of which the hydrochloride is the new body termed "stovaine." It has the formula

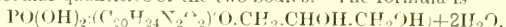


Stovaine crystallises in small scales, melting at 175° . It is very soluble in water, alcohol, and acetic ether, but slightly soluble in acetone. Its reactions are very similar to those of cocaine. It is said that the anæsthetic properties of this body are fully equal to those of cocaine, but that its toxicity is very considerably less than that of the latter compound. In particular it does not possess, like cocaine, the vaso-constricting power to which most of the inconveniences attending the use of that body are due. Its power is rather vaso-dilating.

Quinine Glycerophosphates.—According to Carré ("Bull. Soc. Chim. de Paris," 1904, 803), glycerophosphoric acid furnishes two salts of quinine, a basic and a neutral salt. Various descriptions, often at variance, have been published of the basic salt, and Carré now states that the pure basic salt can be obtained by mixing alcoholic solutions of the acid (one molecule) and quinine (two molecules). Operating in absolute alcohol, one obtains the salt in the anhydrous condition, but if 80-per-cent. alcohol is used, it is obtained in the hydrated state. It is precipitated from the alcohol by the addition of ether, and finally crystallised from a little warm alcohol. The hydrated salt has the composition



When dehydrated by drying at 100° it melts at 148.5° . The neutral salt is obtained in the same manner, by using equimolecular quantities of the two bodies. The formula is



When anhydrous it melts at 151° to 152° . Both salts form well-defined crystalline needles.

Association Ballads.

THE PURPOSE.

*The men, their aims, their daily irk;
Their troubles, trials, thoughts, and views
On things politic, foes that lurk
In friendly guise, but treach'rous work—
These be the burden of our Muse.*

XXXV.—NORTH-EAST LANCASHIRE.

LORD GIFFORD was a citizen
Of famous Blackburn town;
Full cheerfully he spoke his mind
And made McCarthy frown.

He spake with no uncertain voice
(I've often heard declare),
His words did make his brethren laugh
And eke made Bumble swear.

He voiced the thoughts of multitudes
That dwelt in Lanca-sheer;
They wagged their pestles day by day,
But ne'er were known to fear.

He spake no word of calicoes,
Nor mentioned weaving looms,
Or tanjibs, "checks" or "Blackburn Greys,"
But whispered deep of toms.

He conjured up like lightning flame
Imaginary scenes;
And men said, "Watch the Elder Gang
As Gifford gives them 'beans.'"

'Twas thus that North-East Lancashire
Leapt into sudden fame;
For Darwen hitherto was naught,
And Blackburn but a name.

But wisdom from the "White Bull" oozed,
And Bloomsb'ry gazed askance,
While persons lacking "principles"
With Blackburn brake a lance.

The kindly Shorrocks looked and laughed;
And Critchley dignified
The Presidential chair, and smiled
As Jove the world defied.

The ever-helpful Hindle gave
The warning clarion-call,
And North-East Lancashire resolved
To vote for Gifford all.

So straightway to a Council seat
They sent him with his scheme,
And fondly hoped that Pharmacy
From sloth he would redeem.

But when he entered Lotus-land
That legislators love,
The erstwhile roaring lion became
A gentle sucking dove.

But Blackburn men are citizens
Who've earned a wide renown,
And men still hope they'll greet their Lord
With "titles" for his crown.

A PROMISING CUSTOMER.

THE brisk, well-dressed stranger stepped into the chemist's shop and, passing by the boy who usually attended to casual customers, approached the proprietor, who, with his back turned, was rearranging some goods on a showcase.

"Mr. Sawyer, I presume?" he said pleasantly, and the druggist turned and bowed gravely.

"I have heard my friend Councillor Brown speak of you often," said the brisk man. "He told me if ever I needed anything in this line to come to you. He spoke of you as a man on whom one could rely with perfect confidence, who stocked only the best of everything, and with whom it was always a pleasure to deal."

"The councillor is very kind," said the druggist, beaming with gratification. "He is one of my best customers. What can I do for you this morning?"

"Well, er—this morning, as it happens," said the stranger, with a shade less of briskness, "this morning I should like, if you will allow me, to consult your directory."

"Certainly," said the druggist. "We also have a fine line of postage stamps if you ever need anything of that kind."—*Tit Bits.*

Observations and Reflections.

By XRAYSER.

The Transvaal Directors Clause

is not as good as it might have been, though I am not surprised that the almighty guinea should have scored off plain and simple justice in such a centre as Directoria. But it still remains to be seen whether the victory is more than a nominal one. That depends on the exact terms of the successful amendment. All directors are or ought to be managing directors. So that if the Ordinance simply requires all managing directors to be qualified, the chemists have got pretty much what they want. The sleeping gentleman who is recognised and exempted in the Orange River Colony does not seriously affect the principle. But if, as is probable, the Transvaal Ordinance permits any company to carry on any number of businesses provided it employs one person whom it calls a managing director, then sound logic and sweet reasonableness have been sacrificed to guinea-pig greed.

The C.O.D. Extension

of the parcel-post is looming over us far more threateningly now than it did a year ago. In his recent report the Postmaster-General, who is no doubt hard pressed by influential advocates of the innovation, says he is "by no means satisfied that the apprehensions expressed by retail traders afford sufficient cause for withholding the convenience from the community at large." In other words, the *pro*-pressure is overwhelming the *contra*-resistance. Dear old Community-at-large, whose convenience Messrs. Army and Navy, Civil Service, Whiteleys, and Harrods exist to promote! It is hardly possible to doubt that when C.O.D. is in operation these philanthropists will despatch many thousands more parcels throughout the Kingdom, and that these will include a fair proportion of bottles of medicine. Country chemists will still retain the night-bell business, and Community-at-large will be glad to have them at hand in case of emergency, and for the pretty glow their shops give to the streets at night. It may not be too late even now to prevent this grossly ungenerous intervention of the Government on behalf of the wealthier competitors in the already too bitter struggle for existence, but only universal bombardment of the Postmaster-General by memorials from retail traders of all parts of the country will defeat it.

XL-All Insecticide

was bought at Dover for the purpose of suicide, no matter what the Dover florist thought he was selling it for. This surely disposes of the suggestion that the law should be differently applied according to the purpose for which a poison might be intended. Such lurid evidence was not necessary to dispose of Mr. Dobbs, but it should be remembered that the Privy Council is inclined to make the law what Mr. Dobbs says it is. The Coroner was probably strictly correct in advising the jury that the question of how the poison was labelled was a side-issue. The direct duty of a coroner's jury is simply to ascertain the cause of the death under inquest. But in the vast majority of cases it is the side-issues which are of public importance, and when these concern a patent medicine or a prescribing chemist coroners are usually eager enough to follow them.

The British Pharmacopœia

will have to be more exact in its description of finished products if it is to retain its position as a legal standard. In "*Hudson v. Bridge*" it

was held by the High Court that though so much squill and so much acetic acid are ordered to be used in the preparation of acetum scillæ, it does not at all follow that those quantities must be in the resulting compound. Mr. Kirby, I notice, proposes to apply this reasoning to camphorated oil, and obviously it will serve as well in the case of a score of other galenicals. The camphorated-oil case was decided on a flaw in the certificate, but the contention will keep, and it will be interesting to know whether the judgment in "*Hudson v. Bridge*" may be regarded as a principle or a fluke.

The Refreshment-houses Act

has occasionally alarmed chemists, and the report under that heading in last week's Legal Reports may do so again in some quarters. Three Brixton shopkeepers had been summoned for selling herb-beer, sarsaparilla-wine, and lime-juice for consumption on the premises. There was no question of alcohol in the drinks, and the Act does not prohibit the sale of such beverages during the daytime, whether they are medicinal or not. A chemist may sell ice-cream sodas by the hundred if he can between the hours of 5 A.M. and 9 P.M., but if he keep his shop open "for public refreshment, resort, or entertainment," or supply for consumption therein "any victual or refreshment" after 9 P.M. or before 5 A.M., he must have a refreshment-house licence. In the cases referred to the beverages bought were no doubt consumed after nine in the evening, and if so the only question is whether they were medicines or luxuries.

Mr. Burt's Theory of Sea-sickness—

that it is brought on by the frequent contraction of the muscles of the loins and abdomen—seems likely, and I do not recollect to have seen it definitely set forth before. The usual idea is that sea-sickness is the result of nerve-disturbance. This may well be the case without upsetting Mr. Burt. The nerves may be the originating, the muscles the determining, cause. Really the brain is the first offender. It sends orders by the nerves to the muscles, but at first, as Mr. Burt points out, the nerves carry the messages to the abdominal muscles. In time they find out that the messages are intended for the thighs. Dr. Chapman's theory of a rush of blood to the spine does not fit in with this explanation, but perhaps his ice-bags are effective by drawing off the nerves to some other muscles. M. Santos-Dumont, describing his air-ship experiences, expresses some astonishment that he has never felt sea-sick on his trips. In the spherical balloon there is no motion likely to cause sea-sickness. The ascending aeronaut feels as if his vessel is perfectly still; he only sees the earth receding.

Cylindrical Dirigible Balloons,

on the other hand, are continually pitching as they proceed. But the pitching of a balloon is always in one medium, and is therefore regular and easy, while that of the ship, alternating from air to water, is perpetually jerky. "What one feels most distressingly at sea," says M. Santos-Dumont, "is not so much the movement as that momentary hesitation just before the boat pitches, followed by the malicious dipping or mounting which never comes quite the same, and the shock at top and bottom." Those who have known it will recognise the accuracy of this admirable appreciation of the chief charm of a sea-trip; and imaginative readers, when they come to the allusion to the "momentary hesitation" of the ocean vehicle, will probably realise, even in the back shop, that contraction of the muscles of the loins and abdomen which Mr. Burt postulates. If so his theory is proved.

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Editorial Comments.

Duty-free Alcohol.

THE CHANCELLOR OF THE EXCHEQUER announced on September 2 the appointment of the Committee to inquire into the use of duty-free alcohol for industrial purposes, as

noted elsewhere in this issue, the terms of reference being as follows :

To inquire into the existing facilities for the use without payment of duty of spirits in arts and manufactures, and in particular into the operation of Section 8 of the Finance Act, 1902, and to report whether the powers conferred upon the Commissioners of Inland Revenue by this section permit of adequate facilities being given for the use of spirits in manufactures and in the production of motive power, or whether further facilities are required; and, if it should appear to the Committee that the present facilities are inadequate, to advise what further measures could be adopted without prejudice to the safety of the revenue derived from spirits, and with due regard to the interests of the producers of spirits in the United Kingdom.

We thus reach the penultimate stage of a movement which is generally regarded as recent, but which has been agitating the chemical and drug trades for more than half a century.

The Idea of Using Denatured Duty-free Alcohol

for manufacturing-purposes originated in 1847. At that time the illicit manufacturing of alcohol was very prevalent in England, as well as in other parts of the United Kingdom, and manufacturers of varnish, hat-makers, and others purchased smuggled alcohol largely, because the price of duty-paid pure spirit was prohibitive. A manufacturer told the Commissioners of Inland Revenue in 1847 that the addition of bone-oil to ordinary spirit made it perfectly undrinkable, and asked if he could not get such spirit duty-free for manufacturing-purposes. Mr. George Phillips, who at that time was one of the Inland Revenue Surveying General Examiners and the head of the chemical department, had the matter referred to him, as the Commissioners appeared to realise that the suggestion would, if carried into general practice, go a long way towards stopping illicit distilling. Mr. Phillips made an exhaustive inquiry, the result of which was that he recommended either caoutchicine or wood-naphtha as a denaturing agent. His report was referred to Professors Thomas Graham, A. W. Hofmann, and T. Redwood to look further into the matter, and early in 1854 they recommended the Commissioners to authorise the use in the arts of spirit of wine (density not less than 0.830) to which "10 per cent. of purified wood-naphtha had been added, and to use this mixed spirit for consumption duty-free under the name of methylated spirit."

The Report of the Eminent Professors

dealt very fully with the purposes for which this spirit might be employed. They said :

The principal uses to which spirit of wine is, or may be, applied, independently of its use as a beverage, appear to be the following :

As a solvent of resinous substances, which when thus dissolved are used in the manufacture of hats and otherwise as varnishes.

As a solvent employed in the manufacture of many chemical preparations, including the alkaloids and other organic products, which are principally used in medicine.

For the production of ether, chloroform, sweet spirit of nitre, and fulminating mercury.

For burning in spirit-lamps as a source of heat, and for mixing with oil of turpentine or other hydrocarbons for burning in lamps as a source of light.

As a solvent and menstruum for administering the active constituents of animal and vegetable substances used in medicine in the form of tincture, spirit, etc.

As a solvent of essential oils and other odorous substances used in perfumery.

The professors explained fully the use of the spirit in each of these branches, the following being their observations in regard to chemical and pharmaceutical manufactures (the italics are ours) :

Spirit of wine is employed as a solvent in the manufacture of many chemical preparations, including the alkaloids and other organic products, which are principally used in medicine. In manufacturing the alkaloids derived from the cinchona-barks, spirit is used in one part of the process.

Indeed, alcohol appears to be the best and most general solvent for this class of substances. It is used in the manufacture of veratrine, and is required for crystallising morphine, although this alkaloid may be prepared from opium without spirit. It has hitherto been the object of English manufacturers to discover processes for the preparation of chemical products without the use of spirit, and such processes are sometimes adopted to the injury of the product. Spirit of wine may be advantageously used in the preparation of some inorganic salts, such as the proto-sulphate of iron, which when precipitated from its aqueous solution by means of alcohol is less subject to change from exposure to the air than it is when crystallised in the usual way. The resinous constituents of jalap and scammony which are used in medicine are separated from the drugs by means of spirit of wine, and the use of this solvent might no doubt be greatly extended for similar purposes with advantage. *In some cases the manufacture of chemical products has been lost to English manufacturers in consequence of the high price of alcohol or of ether which is made from alcohol.* Thus pure tannin, the preparation of which involves the loss of a large quantity of ether, is imported from abroad at a price at which it cannot be produced at home. Among this class of preparations, involving the use of spirit of wine as a solvent, may be mentioned transparent soap, a pure and elegant preparation for the toilet, which is much used in those countries in which alcohol is cheap, but which, from the high price of the solvent, is but rarely made and little used in this country.

For all the purposes here referred to the methylated spirit appears to be applicable. In addition to our own experiments we have been favoured with a statement of results obtained by Mr. T. N. R. Morson in the preparation of chemical products, and by Mr. Pears in the manufacture of transparent soap.

It will be seen from this that these eminent chemists had a very clear idea of what was required in chemical manufactures, but the Commissioners of Inland Revenue

Appear to have Taken Immediate Alarm,

for on November 2, 1854, the Chairman of the Inland Revenue wrote to the professors stating that the Commissioners had two objects in denaturing, viz. :

First, to prevent the recovery of spirit of wine from the mixture in such a state of purity as to render it potable; and, second, to render the mixed spirit so offensive as to prevent any temptation to its use among the workpeople who will necessarily have access to it in the manufacturing processes in which it will be employed. Now, it is obvious (the Chairman continued) that the use of crude naphtha produces a more offensive mixture than that of the pure naphtha, and that it would probably be so offensive as to preclude its consumption by workpeople, and this would be an important point gained. It is also obvious that any attempt to render it potable (as an article of commerce) would be more troublesome and expensive. The question then remains, whether the crude mixture would be generally available in arts and manufactures.

The professors took time to reconsider the matter, and did not reply until January 8, 1855, when they wrote stating that they were unable to recommend any alteration in the mode of preparing methylated spirit. They said, *inter alia* :

"We believe that if very impure wood-naphtha be used for making the methylated spirit, *the spirit so prepared would not fulfil the requirements of any class of manufactures referred to in our report, unless the purification of the spirit before its use be permitted*, and such, we presume, would not be deemed advisable. If this purification was forbidden, the honest manufacturer would obey the law, and work to a great disadvantage as compared with his less scrupulous competitors, who would resort to illicit purification.

The conclusions that we have come to, as the result of our investigations on this subject are that methylated spirit made with a very impure wood-naphtha could not be advantageously used as a solvent for resins by hatters and varnish-makers, as the less volatile parts of the naphtha would be retained by the resins after the spirit had evaporated, and the quality of the resins would be thus impaired; and that *such methylated spirit would be almost wholly inapplicable for chemical and pharmaceutical purposes*, and for the preservation of objects of natural history. The benefits anticipated from the proposed measure would thus be greatly limited, without, as we believe, any adequate advantage resulting, either in increased security to the revenue or otherwise.

It is purified wood-naphtha, and not the impurity which crude naphtha contains, that presents the great and in-

superable difficulty which we have indicated to its separation from spirit of wine with which it has been mixed. In fact, the more highly purified the naphtha is with which the spirit is mixed, the more difficult will it be to effect an alteration of this mixture, in the way contemplated, by any chemical process; and in proportion as this condition is fulfilled, the mixed spirit will be more valuable for use in arts and manufactures as a substitute for spirit of wine.

The professors suggested that the sale of methylated spirit by retail should not be permitted. The Act 18 and 19 Vict., cap. 37, passed in 1855 "to promote the advancement of arts and manufactures in the United Kingdom by allowing spirit of wine to be used duty-free in the various processes thereof," required that the spirit of wine be not less than 50 overproof, and that it be mixed with not less than one-ninth of its bulk measure of wood-naphtha. The term "wood-naphtha" was applied at that time in commerce to crude wood-naphtha and purified wood-naphtha, and the recommendation of the three eminent professors to methylate with purified wood-naphtha was in practice ignored, for the Inland Revenue authorities by Section 9 of the Act had control of the stores through which the wood-naphtha was procured, and from the first they have insisted that the most nauseous quality of wood-naphtha alone should be employed. Thus the desire of Professors Graham, Hofmann, and Redwood

To Foster British Chemical Industry

was defeated from the outset. Although methylated spirit has undoubtedly been a boon in the arts and manufactures, it has not sufficed for many of the new chemical processes which have arisen during the past fifty years. Before touching upon the more recent developments in the matter we may recall the fact that in 1861 the Commissioners of Inland Revenue recommended the Government to authorise the retail sale of methylated spirit in quantities of not more than one gallon at a time, and the retail licence-duty was fixed at two guineas. This was duly authorised by Parliament, and in 1867, on the petition of the Pharmaceutical Society, the licence-duty was reduced to 10s. In the Spirit Act of 1880 the various enactments upon the subject were codified.

The agitation with which Mr. Tyrer's name has been so closely identified commenced nearly twenty years ago, when the demand arose for a drawback upon exported spirituous medicinal preparations. During the discussion upon this matter the disabilities of chemical and pharmaceutical manufacturers in respect to the use of duty-free or denatured alcohol were fully gone into, but it was not until 1902 that anything definite came out of it. Then a section was introduced into the Finance Act giving the Commissioners of Inland Revenue power, when the use of methylated spirit is unsuitable or detrimental in manufactures, to authorise the delivery to persons of undenatured spirit under adequate security. Under this section the Commissioners have given certain manufacturers the requisite authority, but in every case they require the spirit to be denatured so as to make it unpotable, although not unsuitable for the process of manufacture, and the persons receiving such spirit have been required to give heavy bonds and to permit the continuous presence as inspectors of revenue officers paid by them. The conditions are so onerous that only rich firms can possibly meet them.

The Operation of the 1902 Section

is the first duty imposed upon the Committee of inquiry, and as it covers the requirements of chemical and pharmaceutical manufacturers we hope that everyone interested in Great Britain will communicate to Sir Henry Primrose, K.C.B., Somerset House, Strand, London, W.C., his views upon the matter. We may state that, up to the present and as far as the manufac-

ture of pharmaceutical preparations is concerned, it has been generally agreed that the revenue conditions can scarcely be met by individual firms in London and the provinces, and therefore it has been suggested that a sort of co-operative factory should be established wherein individual manufacturers may conduct processes with duty-free spirit. In such a case the bond required by the Government would be ensured by the firms in the combination, and a common manager to control the factory would be appointed. The factory would work only during revenue hours, and would be constantly under the inspection of revenue officers paid by the co-operation. This scheme has been seriously discussed by London manufacturers, and would doubtless go far to meet their requirements; but it is difficult to see what benefit it would be to provincial manufacturers, and their interests must be considered. It is well known that German and French laws specify a great range of denaturing agents. The 1902 Act enabled our revenue authorities to advance in this respect, and they have done so in the few cases which have benefited by the provisions; but they insist that each case shall be treated on its merits, and while they have laid down general conditions (for which see the *C. & D. Diary*, page 284), there has been no attempt to investigate the requirements of particular branches of manufacture, and formulate regulations suitable for particular substances, as is the case in Germany and France. This is a point which deserves the attention of the Committee, and it is particularly desirable that the Committee should consider whether the industries of the country may not be benefited by replacing a portion of the prevention policy of the Commissioners by the detection method so strongly urged by Professors Graham, Hofmann, and Redwood.

The Use of Spirits for Motive-power

is a further subject of inquiry. It is understood that methylated spirit at present sold by retail is fit for motive purposes, so that this part of the inquiry will chiefly resolve itself into consideration of the methods of distributing the spirit. It is necessary that motorists should be able to get supplies of spirit at any inhabited place. The law prevents them getting more than one gallon at a time from retailers, but if they are authorised to get the spirit as users they may obtain five gallons or more from methylators. These conditions are inadequate for the requirements, and the Committee will possibly consider the desirability of permitting retailers of methylated spirit to supply licensed motorists with the spirit in two-gallon tins, as is now done with motor-spirit made from petrol.

Precautions.

The Committee is also asked "to advise what further measures could be adopted without prejudice to the safety of the revenue derived from spirits and with due regard to the interests of the producers of spirits in the United Kingdom." Here are two precautions. The safety of a revenue amounting to at least 20,000,000*l.* a year is worth guarding; and the authorities have abundant evidence to justify their scrupulous, almost pedantic, care. They act in the light of generations of experience, which induces them not to trust anybody. The second precaution refers to the peculiar conditions under which our spirit-industry is conducted. Here, again, safety of the revenue prevents distillers adopting new methods, therefore prevents them competing in price with colonial and foreign distillers. Equity requires that our home distillers should be safeguarded both as regards the capital they have sunk in plant, and protection up to the point at which revenue-inspection increases cost of production. We understand

that under present conditions spirit costs our distillers at least 2*d.* per proof gallon more than it costs German distillers, and to wipe this out means the sacrifice of millions of capital. Who should meet this loss, the State or the distillers? Equity says the State, but State compensation generally means putting into one pocket what is taken from another—for example, compensating distillers by adding to the spirit-duty. This would not make cheaper spirit. There are many other problems to be considered, which space will not permit our dealing with now, but sufficient has been said to show that the opportunity of investigation is one which requires the most statesmanlike conduct on the part of all concerned.

Transvaal Triumphant.

THE Transvaal Medical and Pharmacy Ordinance was gazetted on "the glorious twelfth" of August, having been assented to by Lord Milner two days previously. In accordance with Section 8 of the Ordinance the elections of the Medical Council and Pharmacy Board were immediately proceeded with, but the Ordinance as a whole does not take effect until a day appointed by the Lieutenant-Governor. With the exception of Section 37 and a few trifling verbal alterations, the Ordinance is in the same terms as those which we so fully printed in our issue of July 30. We note that 5*l.* has been fixed as the fee for the qualifying examination. The letters we have received from chemists in the Transvaal indicate some disappointment in regard to the amendment of the company clause (*i.e.*, Section 37). One says "the heart has been taken out of it," this opinion being shared to a less extent by others. Probably the feeling arises from the comparative non-success of the strenuous efforts which were made to retain the clause as it stood in the draft, for the terms of the enacted section are really far ahead of the Orange River Colony section dealing with the same matter. In order to show what the Transvaal section is and what changes it has undergone, we reprint it from our Summer Issue, putting words which have been deleted within brackets, and printing in italics words which have been introduced as amendments:

No [company] *society or association* of persons who are not registered under this Ordinance may use the descriptions or titles provided herein nor may any company *incorporated by law* carry on [the profession of medical practitioners or dentists or] the business of chemists and druggists [as the case may be] unless the [directors] *managing director* of such company [are] *is* a duly registered [medical practitioners or dentists or] chemist[s] and druggist[s] [as the case may require] and unless the name of the assistant who himself must be qualified under this Ordinance managing such shop or other place in which the business is carried on by the company is conspicuously posted in such shop or place; provided that anything which would be an offence under this Ordinance if committed by an individual shall be an offence *by every director of a company* if committed by [a] *such company*; provided further that nothing in this section shall be held to prevent the employment by any registered dentist or chemist and druggist as the case may be of an unqualified assistant or assistants for the purpose of mechanical dental work or of compounding drugs and dispensing medicines under his personal supervision.

It will be seen that two deletions have been made—(1) the specific mention of medical practitioners or dentists is removed, and (2) instead of all directors of chemist-companies being required to be registered under the Ordinance, only the managing director is to be so registered; but, as a set-off to the latter, *every director* of a company is made liable for an offence committed by such company. This is a most important interpolation, and a new provision in British pharmacy law. Let us see how the matter stands. The Orange River Colony

Ordinance brought for the first time into the statute-book of the Empire the following provision:

The management of a firm or company retailing or dispensing poisons or medical prescriptions to be in the hands of a partner or partners, director or directors registered under the Ordinance.

That is really the sole company requirement in the O.R.C. Ordinance. The Transvaal section contains much more. We take the provisions in their order:

1. No society or association of unregistered persons can use the title "chemists and druggists" *inter alia*.

This appears to be absolute; that is to say, the phraseology of the section disjoins from the provision the condition of the second provision—*viz.*, "unless the managing director is a . . . chemist and druggist." This is obvious from the fact that the titles provided by the Ordinance are (a) medical practitioner, (b) dentist, (c) chemist and druggist, (d) midwife, and (e) nurse. It is therefore clear the Ordinance means that the titles acquired by persons as the result of qualification shall not be used by companies which are *de facto* societies or associations of persons. This is a distinct gain.

2. The managing director of a chemist-company must be a registered chemist.

3. The name of the assistant managing a company shop must be conspicuously posted on the shop.

The second provision is substantially the same as the O.R.C. one, but it covers "the business of chemist and druggist." The third provision is the Lord Chancellor's old proposal, now for the first time enacted.

4. An offence committed by an individual shall be an offence by every director of a company if committed by such company.

This is an elaboration of one of the reforms that the Pharmaceutical Society is trying to get. The elaboration consists in making every director (instead of the company as an entity) liable for infringements of the Ordinance. Among the offences are:

1. Keeping or selling poisons without labelling them "poison." Penalty, up to 75*l.*, or six months' imprisonment. Erasure from the register.

2. Keeping poisons without due care. Penalty, up to 10*l.*, or one month's imprisonment.

3. Selling poisons without qualified supervision. Penalty up to 50*l.*, or two months' imprisonment.

4. Selling or dispensing poisons in a manner contrary to the provisions of Section 55. Penalty as No. 3.

5. Failure to produce poisons-book on authorised demand. Penalty up to 20*l.*, or three months' imprisonment.

Surely the heart is not taken out of the measure when such salutary provisions as these remain in it. They insure that financiers and others not chemists who undertake the duty of controlling companies trading in the business of chemist and druggist shall be personally responsible for infractions of the law by the companies' servants. This is merely an equitable adjustment of the responsibility imposed upon qualified individuals, and it is a more thorough enactment than that proposed in Great Britain. We congratulate the chemists of the Transvaal on their achievement, and may add to this thanks of chemists at home for a piece of excellent pioneering work.

New Pharmacy Regulations for Russia.

THE Russian Minister of the Interior with the assistance of the Chief Medical Inspector has drafted new statutes for pharmacies in Russia with an explanatory memorandum. The draft regulations have been sent to the various local authorities throughout the country for their consideration previous to their being further proceeded with. Generally

the conditions on which a pharmacy may be owned are such as obtain elsewhere in Continental countries. But Article 5, as to transfer, is carefully constructed to keep out ignorant pharmacists, for it purposes to enact that if a pharmacy be transferred to a person not qualified, say by inheritance, it must be sold by the unqualified legatee within a year to a qualified pharmacist. No one having established a pharmacy may within a period of three years from its opening sell or mortgage it, or in any form whatever transfer possession to anyone. But of course such limitation does not extend to the heir of the founder. Again, a pharmacy belonging to any administrative or public institution may not be sold, mortgaged, or hired, or in any way whatever transferred to anyone. Article 7 forbids any one person or company having more than one pharmacy for the free sale of medicines; public and purely charitable institutions being exempt. A pharmacist deprived of his right to hold a pharmacy for any illegality must sell his pharmacy within a year, confiding it meantime to a qualified manager. In default the manager will be appointed for him at his expense, or the business will be closed. By Article 14 to pharmacists is secured the exclusive right to make up and sell physicians' prescriptions, but doctors are authorised by permission of the local Government to sell medicines to the public at tariff rates only in districts where there is no pharmacy. All new remedies, whether of Russian or foreign manufacture or origin, must be sanctioned for sale by the Minister of the Interior after they have been examined by the Medical Council. The conditions attending the importation of foreign medicines into Russia and the sale of such are subject to the rules of the Medical Council. Permits to open a pharmacy are not transferable, nor does a permit have any testamentary value in case the holder thereof dies before the establishment is opened. A pharmaceutical education is open to both sexes. The rules with respect to pharmaceutical apprentices will be drawn up by the Medical Council and confirmed by the Minister of the Interior. Pupils can only go forward twice to be examined for the position of assistants, and assistants must have served at least three years in a pharmacy before they can be examined for the degree of pharmacist. Chapter 4 deals with manufacture by wholesale. This is subject to the control of the local Government, and the sale of medicines manufactured in factories may only take place wholesale—in pharmacies, medical establishments, etc.—and only in packages properly closed or sealed. The penalties for breaches of these rules range from 5*l.* fine for the first offence to 10*l.* for the second, and various periods of disqualification from acting as pharmacists—even as assistants—for the third offence, etc., including the closing of premises. There is a separate section dealing with homœopathies. Homœopathic chemists may deal in homœopathic medicines only, but first grade pharmacists, on the other hand, may dispense homœopathic medicines. Some interesting observations are made in the memorandum accompanying the rules (of which the foregoing is a brief abstract) regarding the development of Russian pharmacy. Peter the Great first founded free dispensaries two hundred years ago. But the existing pharmacy laws may be said to date from the issue of the first pharmacy statutes at the end of the eighteenth century, the second based thereon having been issued on December 23, 1836. This was incorporated in the medical statutes published in 1857 without change, and again almost without change in the last issue of the medical statutes, 1892, simply with the addition of the regulations for installing pharmacies in country communities. The only declarations affecting the situation since then until the present day were as to the opening of new pharmacies, in January, 1898, and regarding the manufacture of medicinal preparations, in May of the same year.

Anæsthetic Chloroform.

THE purity of chloroforms used for anæsthetic purposes has frequently been the subject of researches by chemists, and many conflicting statements have been published about the matter. When the late Mr. A. H. Mason introduced commercially chloroform made from acetone it was received with much favour, but an unfortunate fatality in Manchester which resulted from its use gave the impression that the article contained something injurious. This put the product under a cloud for some years, but more recently chloroform prepared from acetone has returned to favour, and is known to be chemically pure. Nevertheless, anæsthetists have observed some difference in action between it and chloroform prepared from alcohol. The matter has now been satisfactorily explained by Messrs. John Wade, D.Sc., and Horace Finnmere, A.I.C., of Guy's Hospital, in a paper communicated to the "Journal of the Chemical Society" for July. They say that clinical experience indicates that chloroform made from acetone is distinctly inferior to the alcoholic product, as the patient often has an undue tendency to cough and hold the breath, and the prolongation of the time of induction thus materially increases the risk of an overdose. The authors made a series of fractionations of various chloroforms with Young's pear-head still, and it was noticed that chloroform made from alcohol began to distil at 54° C., while that made from acetone did not begin until 55° C. This is the main fact of pharmaceutical importance deducible from the research. The series of fractionations which followed demonstrated that the possible constituents of constant boiling-point which may be isolated from a mixture of chloroform (C), alcohol (A), and water (W) are as follows:

Constituent	B.-p.	Composition		
		Chloroform	Alcohol	Water
1. Ternary, C.A.W.	55.0°	92.5	4.0	3.5
2. Binary, C.W.	55.1°	97.5	—	2.5
3. " " C.A.	59.4°	93.0	7.0	—
4. Chloroform, C.	61.5°	100	—	—
5. Binary, A.W.	78.15°	—	95.5	4.5
6. Alcohol, A.	78.3°	—	100	—
7. Water, W.	100°	—	—	100

The authors found that anæsthetic chloroform prepared from acetone behaved on distillation according to the requirements deduced from the experiments, therefore that it "is a pure product, and contains no foreign substance other than the preservative alcohol, and a trace of water"; further than the fraction distilling between 54° and 55° C. from the chloroform prepared from alcohol is a foreign substance. They prove that this is ethyl chloride, present to the extent of about 0.05 per cent., and naturally present owing to the action of chlorinated lime on alcohol during the process of manufacture. No such reaction can take place in making chloroform from acetone, and the authors prove that the ethyl chloride is not formed in commercial chloroform owing to decomposition of the chloroform and reaction between the resulting chlorine and the preservative alcohol. Their discovery accounts for the physical behaviour of alcohol-chloroform, and also for its superiority as an anæsthetic over that made from acetone, because ethyl chloride induces anæsthesia by three or four inhalations, thus removing the irregularity of breathing and diminishing the time of induction. Clinically it has been proved that the addition of a small quantity of ethyl chloride to chloroform prepared from acetone makes it in every way

equal to chloroform prepared from alcohol. This addition will no doubt be made by manufacturers, and, although it is in the chemical sense an "impurity," the next British Pharmacopœia would do well to provide for it by an alteration of the boiling-point factor, which at present is 60° to 62° C. It may be novel for the Pharmacopœia to insist upon an impurity in a therapeutic agent, but since it is demonstrated that the full therapeutic properties of what is known as chloroform are only obtained when it contains ethyl chloride, the presence of that body must be insured.

Our Inland Revenue.

THE report of the Commissioners of Inland Revenue for 1903-4 (being the forty-seventh) comes to us somewhat later this year. It is nearly all statistics, and extends to 240 pages, a total gross revenue of 106,709,505*l.* being dealt with, but it is better to regard the receipts as being less than that, and the following shows the official classification and amounts:

Excise-duties	£37,859,992
Estate, etc., Duties	17,468,242
Stamp-duties	7,428,356
Land-tax	783,664
Inhabited-house Duty	1,897,032
Income-tax	33,369,247
	£98,806,533

We take these in their order and select the items which appeal to our readers. Of the Excise-duties beer and spirits between them yield over 32 million pounds, the spirit-duty alone amounting in the last fiscal year to 18,667,818*l.*, this being paid on 34,103,000 proof gallons retained for consumption in the United Kingdom. The quantity represents 0.99 gallon per head of population, compared with 1.03 gallon in 1902-3. We are getting soberer. For the first time there is an item under "spirit-duty" which deserves quotation in full. It is:

The quantities of home-made and foreign spirits used in arts and manufactures, free of duty, under Section 8 of the Finance Act, 1902, were:

1902-3	699 proof gallons.
1903-4	208,724 "

These figures are particularly interesting in view of the spirit inquiry, especially as they represent what half-a-dozen manufacturers are using. If all the chemical and pharmaceutical manufacturers in the Kingdom were enjoying the privilege, the figures would go into millions of gallons. In connection with this inquiry we may note that last year nearly 52 million proof gallons of spirits were distilled in this country, and the stock in the warehouses on March 31 was over 167 million proof gallons. During the past ten years 64 million proof gallons of spirits have accumulated in the warehouses, although many distilleries have been closed. In short, distillers are producing about 15 million proof gallons of spirits more per annum than they can sell, and this fact has much to do with the desire to find fresh outlets for it. Of home-made spirits 5,054,586 gallons were methylated last year, and 334,140 gallons of Colonial and foreign spirits. The total is not quite so great as in 1902-3, but the amount of home spirits is more, and the Colonial and foreign much less. We are pleased to see saccharin figure for the first time as a source of inland revenue. None was manufactured in this country until 1903-4, then 14,496 oz. was charged with duty amounting to 906*l.* The factory at which this is produced was not working during the whole fiscal year, and as the Customs-duty paid in 1902-3 amounted to 14,696*l.*, it is apparent that the scope for production is great.

The Excise-licences section of the report reveals the following items among others:

Methylated-spirit makers	31
Still, chemists, etc., using	905
Patent-medicine makers or vendors... ..	38,462

There was a big increase in the last item, only 36,366 licences having been taken out in 1902-3; England accounts for 2,045 of the increase. But the amount of medicine stamp-duty paid (323,446*l.*) was less by 9,925*l.* In 1902-3 England made a jump from 304,195*l.* in the previous year to 331,086*l.*, so that the latter amount was quite abnormal, and due probably to the introduction of such new articles as Bile beans and Doan's pills. The "Farmer v. Glyn-Jones" decision (the official report of which we print elsewhere) cannot have made an appreciable difference on the stamps sold. Last year the falling-off in stamped articles and increase in the number of people selling them give us another abnormal condition. If we take the amount of duty as the basis, and reckon the 1½*d.* on 1*s.* stamp as the average rate of duty, we find that the public in Great Britain spent 2,587,568*l.* on patent medicines last year—probably less. From this datum and the number of licences we reckon the following:

1. Yearly sales by manufacturers on the basis of 8 <i>s.</i> per dozen for 1 <i>s.</i> 1½ <i>d.</i> articles	£1,725,000	0	0
2. Manufacturers' profits at 20 per cent.	345,000	0	0
3. Wholesalers' profits at 5 per cent.	86,250	0	0
4. Retailers' profits at 5 per cent.	86,250	0	0
5. Average sales per annum by each of 38,462 licensees	67	0	0
6. Average annual profit on sales (67 <i>l.</i>) by others than makers:			
Calculated on No. 4, about	2	5	0
Calculated at 5 per cent.	3	14	0
7. Wholesalers' profits if all were on P.A.T.A. terms	172,500	0	0
8. Retailers' profits if all were on P.A.T.A. terms	345,000	0	0
9. Average annual share of profits No. 7 and 8 per licensee	13	13	0

In each case we mean gross profits. Many years ago a manufacturer informed us that he had a net profit of 3*d.* on a 1*s.* 1½*d.* article, but the margin is much less now. The figures which we put down for wholesalers' and retailers' profits are convenient approximations; thus wholesalers reckon that the turnover of "patents" leaves them 1 per cent. or less after paying all expenses.

Anti-cutting in Canada.

We have received a copy of the agreement issued and recommended by the Joint Committee representing the Canadian Wholesale Druggists' Association and the Drug Section of the Retail Merchants' Association of Canada. It is dated Toronto, August 10, and sets forth that the retail druggists of Toronto and Hamilton at present lose \$100,000 a year through cutting on patent medicines. The object of the agreement is to simultaneously advance the prices of all such articles to face-value. This is to be done when the agreement has been signed by two-thirds of the druggists in Canada, each of whom has to pay \$1. The agreement consists of twenty-one clauses, and is somewhat complicated. Broadly, it may be said that it requires the wholesale price of dollar medicines to be \$8 per dozen as a maximum, and other prices proportionately; and retailers are to support wholesalers in getting an assurance from manufacturers that the profit to wholesalers will be at least 15 per cent., freight paid. Retailers agree not to purchase, sell, or handle any medicine whose price is not protected by the makers, nor to sell such medicines to retailers who cut prices. Manufacturers and wholesalers similarly agree not to sell to cutters, and the interests of the wholesalers are further conserved by a clause which

requires manufacturers to charge wholesale price to retailers who buy direct from them; and, as a set-off to this, a clause prohibits wholesalers soliciting orders from physicians and veterinary surgeons, so that this trade may be done by retailers. It will be interesting to see how the scheme works. The fact that it starts after the details of the agreement were generally agreed to gives it a chance of success, but there appear to be too many subsidiary interests attached to it for smooth working.

English Poppies.

A recent issue of the "Yorkshire Post" contained an interesting and cleverly written account of the gathering of English poppies in Yorkshire, from which it appears that the centre of the industry in that county is at Poppleton-on-Ouse, about four miles from York, where also at one time peppermint growing and distilling were an active pursuit. Now, however, it is entirely given over to poppy-culture, and leading growers show keen rivalry in endeavouring to raise the largest capsules, average sizes of which are worth about 8s. per thousand to buy from the growers. The harvest usually takes place in August, in which month the plants have attained a height of over 4 feet, and an acre of poppies is then a magnificent sight. At the time of the writer's visit to the fields,

Three workers were slashing at the heads, here and there, as they waded through the crop. The only implement used was a jack-knife, with which they cut off about a foot of stalk, when out flowed copiously a creamy-looking sap. This soon covered the harvesters' hands and aprons, with it being mingled the living juice and integument of millions of small black lice which crowded on leaf, stem, and poppy-head, forming thus a noxious ointment for hands and arms. The men said they did not fear a cut with their big knives, as this natural ointment prevented the possibility of pain, and soon healed even a big gash. A strong smell of laudanum haunted the air; and as the millions of black lice on the leaves would appear to have had a long feast sucking up the sap, no doubt they had passed through all the stages of stupefaction and succumbed at last, like the Heathen Chinee to his opium. Anybody troubled with insomnia should help at the poppy-harvest, for after half a day's work the novice would probably want to sleep four-and-twenty hours.

The heads are gathered in bundles of about thirty-five and secured with sheaf-bands. Then they are carted away to the barns and dried. In about three weeks' time the heads are so hard that, as one farmer observed to the writer, "you can't bruzz 'em wi' your fists." With about fifty thousand heads to the acre, this final labour takes up a deal of time and makes a big hole in the profit, added to which probably one fourth part of a poppy-crop is never cut, since all the heads do not grow to an appreciable size.

Analyses in Trinidad.

Professor P. Carmody, F.I.C., F.C.S., the Government analyst of Trinidad, in the course of his report for the year 1903-4, states that the total number of samples examined by him during the year was 1,590. These included Revenue samples, criminal cases, sanitary, agricultural and industrial, miscellaneous, and official (86 only). By a singular coincidence the same number of samples (243 each) was examined under "Criminal cases" and "Sanitary." The police cases included 105 suspected poisonings, 61 stains, 20 counterfeit coins, 33 cases of arson, 17 ganja, 4 illicit distillations, and 3 miscellaneous. Among the poisons found were barium carbonate (in "Yam-Ga," the Bombay rat-killer), ground glass, chloride of tin, opium (4), arsenic (3), ammonium sulphide, hydrocyanic acid (3), basic lead chromate, and ammonia. This section, comments Professor Carmody, furnishes every year further evidence of the pressing necessity for restricting the sale of poisons. The deaths from opium and hydrocyanic acid were probably accidental—the former from over-doses and the latter from cassava improperly cooked. Under "Sanitary" the samples examined were milk, rum, and aerated waters; no drugs are mentioned.

Of the sixteen samples of aerated water examined, only one contained an excessive amount of metallic impurities. In the "Miscellaneous" section several cassavas were examined in continuation of previous work. The results, as given in tabular form, show that in the sweet and bitter varieties there is a great difference in the proportion of hydrocyanic acid to be found in the inner edible part and in the outer skin. Since Professor Carmody's results were first published in 1900, similar results have been obtained, by other analysts, from cassava grown in Jamaica and in Australia, and in the course of his investigations Mr. Cousins, Government analyst of Jamaica, has met with a special Columbian variety of cassava which contains much less poison than the ordinary sweet variety. This discovery should be of value in the West Indies, where many deaths are due to cassava poisoning.

SHEEP-DIPPING.

THE minutes of evidence taken before the Departmental Committee appointed by the Board of Agriculture and Fisheries to investigate experimentally and to report upon certain questions connected with the dipping and treatment of sheep, with appendices, has been published at 2s. 4d. by H.M. Stationery Office and may be obtained from Messrs. Eyre & Spottiswoode, East Harding Street, E.C.; Oliver & Boyd, Edinburgh; or E. Ponsonby, 116 Grafton Street, Dublin. The following witnesses were examined:

Mr. W. Acton Adams, Tipapa, Canterbury, New Zealand.
Mr. Walter Leach, Chemist to the Yorkshire Woolcombers' Association (Limited).
Mr. Robert Fisher, Leonfield, Beverley, Yorkshire.
Mr. John Robson, Newton, Bellingham, Northumberland, Secretary of the Cheviot Sheep Society.
Mr. Cecil Warburton, M.A., Zoologist to the Royal Agricultural Society of England.
Mr. Fred V. Theobald, M.A., Lecturer in Zoology, South-Eastern Agricultural College, Wye.
Mr. Alfred Mansell, College Hill, Shrewsbury, Secretary of the Shropshire Sheep-breeders' Association.
Mr. S. Kidner, Bickley, Milverton, Somersetshire.
Mr. J. E. Fawcett, Canal Road, Bradford, Chairman of the Wool-trade Section of the Bradford Chamber of Commerce.
Mr. Alfred Amos, Wye, Kent.
Mr. John W. Wallace, Ford, Thornhill, Dumfriesshire.
Mr. Robert W. Hobbs, Kelmscott, Lechlade; nominated by the Royal Agricultural Society of England.
Mr. John Craig, Innergeldie, Comrie, Perthshire, member of the Committee.
Sir Henry H. Scott, Hipsburn, Lesbury, Northumberland, member of the Committee.
Mr. James E. Rawlence, 49 Canal Street, Salisbury; nominated by the National Sheep-breeders' Association.
Mr. Robert J. Hickes, F.R.C.V.S., Veterinary Inspector to the East Riding County Council.
Mr. A. C. Cope, M.R.C.V.S., Chief Veterinary Officer of the Board of Agriculture and Fisheries.
Mr. William Darlington, Clevelode Farm, near Malvern, Worcestershire.
Mr. Charles T. Scllens, Lydd, Kent.
Mr. Duncan McDiarmid, Camusericht, Rannoch Station, N.B.; nominated by the Highland and Agricultural Society of Scotland.
Mr. William Crabtree, First Class Examining Officer, Board of Customs.
Mr. Matthew Flanagan, Tomona, Tuusk, Rosecommon, member of the Committee.
Mr. R. G. Carden, Fishmoynne, Borrisoleigh, Ireland; nominated by the Royal Dublin Society.
Mr. Thomas Porter, Inspector of the Department of Agriculture and Technical Instruction for Ireland; nominated by the Congested Districts Board for Ireland.
Mr. John Roberts, Plas Heaton, Henllan, Trefnant, Denbighshire.
Mr. J. Bowen-Jones, Beckbury, Shrewsbury, member of the Committee.
Mr. William A. McTurk, Barlae, Dalry, Galloway.
Mr. Walter Stevenson, 11 Park Mansions, Stirling; nominated by the Scottish Chamber of Agriculture.
Mr. M. Hedley, F.R.C.V.S., Chief Veterinary Officer, Department of Agriculture and Technical Instruction for Ireland; member of the Committee.
Mr. A. H. Berry, F.R.C.V.S., Superintending Veterinary Inspector, Board of Agriculture and Fisheries.
Mr. Thomas Winter, M.A., Professor of Agriculture, University College of North Wales.
The Blue-book contains much that interests agricultural chemists and manufacturers of sheep-dips and kindred products, which they will find it advantageous to con at first hand.

The Testing of Quinine Sulphate.

By DAVID HOWARD, F.I.C., F.C.S.

THE interesting and valuable paper by Dr. Paul gives very accurate determinations of the solubility of cinchonidine in pure ether. The very varying statements which he quotes as to its solubility may probably be explained by the purity of the ether used. A small percentage of spirit greatly increases the solubility of cinchonidine: ather of the Pharmacopœia will dissolve nearly twice as much as æther purificatus.

But though admiring the accuracy of Dr. Paul's work on pure materials. I cannot help thinking that his proposed alteration of the test for quinine sulphate is entirely in the wrong direction. If the whole cinchonidine would collect in the mother-liquor of a single recrystallisation, the refining of quinine would be much simpler than it is. Unfortunately cinchonidine sulphate persistently crystallises with quinine sulphate in varying proportions far in excess of those which might be deduced from relative solubility. This takes place specially below 50° C.; above that temperature the crystallisation is approximately pure, and therefore the Pharmacopœia directs that the solution shall be filtered from the quinine crystallised at 50° C., evaporated down to 10 c.c., and, when cold, the whole magma of crystal and liquor (not the liquor only) shaken with "æther." If æther purificatus is used, the dissolved quinine is very apt to form a jelly and render the separation of the cinchonidine impossible.

If the solution of the quinine is allowed to crystallise fully, and still more if the solution is evaporated and allowed again to crystallise, a very large proportion of the cinchonidine present in the sample will be found in the crystal, and a sample which passed the test so applied would be of very inferior quality, containing far more cinchonidine than that indicated by the test.

The only ready means of obtaining quinine free from cinchonidine is to crystallise the acid sulphate of the impure quinine; by evaporation and crystallisation of the liquor, the cinchonidine can be concentrated till the solution contains about equal quantities of cinchonidine and quinine. At this point no further crystals of acid sulphate of quinine are obtained. If the solution is then shaken with ether and ammonia, the quinine contained in the crystal approximately balances the cinchonidine dissolved in the ether by the quinine.

Dr. Paul appears to doubt that the crystals obtained from ether from a mixture of quinine and cinchonidine contain quinine. Whether in "suitable" circumstances they can be obtained free I cannot say, but in ordinary circumstances I have always found them, even when clear, bright, definite crystals and well washed with ether, to contain from 20 to 30 per cent. of quinine. This can be shown by making them into tetrasulphate and crystallising from absolute alcohol. The crystal is then pure tetrasulphate of cinchonidine, and the solution contains all the quinine, along with some cinchonidine.

It is quite true that the weights of crystal allowed in the Pharmacopœia test are purely arbitrary, but so would be those of Dr. Paul's test. It is a great question if, in view of these difficulties in applying tests founded on separating and weighing cinchonidine, it would not be wiser to adopt the excellent test now adopted in the Codex Français; it avoids the great defects of the other forms of ammonia-test, is very easy of application, and gives results which, if arbitrary, are accordant when reasonable care is taken. It is true that it indicates the presence not only of cinchonidine, but of hydroquinine, and possibly of other

less-known alkaloids; but, in default of any certain information as to the medicinal value of these impurities, can this be regarded as a defect? The test is most simple:

Two grammes of sulphate of quinine and 20 c.c. of water are maintained at 60° C., with frequent agitation, for half an hour. The vessel is then allowed to cool completely, and then kept in a bath at 15° C. for half an hour, with frequent agitation. Five cubic centimetres of the clear solution mixed with 7 c.c. liq. ammon. must remain bright.

Practical Notes and Formula.

PROTECTING LABORATORY-TABLES.

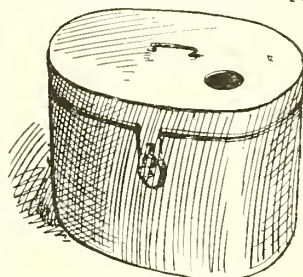
THE following method of preparing table-tops and protecting them from the effects of acids and alkalis is an improvement on the usual method of using paraffin wax. Three coatings of each solution are alternatively applied, and finally, after a week, a coating of linseed oil.

1. Aniline chloride	...	...	15 grams
Water	...	...	100 c.c.
2. Copper sulphate	...	...	86 grams
Potassium chlorate	...	...	77 grams
Ammonium chloride	...	...	33 grams
Water	...	...	1000 c.c.

The wood is stained an intense black, and a coating of linseed oil once or twice during the year is sufficient to keep the surface in condition.—*Annales de Chimie analy.*

CAT POISONING.

PERHAPS a new and elegant method for the destruction of animals will be welcome to pharmacists, by which the old-fashioned and risky procedure of holding the cat by one hand and injecting a quantity of hydrocyanic acid down its throat with the other, is entirely superseded. Procure an oval tin hat-box (as shown in the illustration), the most convenient size being 14 inches long and 10 inches deep, furnished with padlock and key, and through the top cut a hole about 2 inches in diameter, into which fit a bung—a stout cork covered with plaster skin answering the purpose admirably. The cat (or dog, if sufficiently diminutive) is placed in the box, which is then securely padlocked, and a small wad of absorbent cotton-wool saturated with Scheele's 4-per-cent. acid is dropped through the opening in the lid, after which the bung is inserted. From two to three minutes is sufficient to end painlessly the miseries of the most robust specimen of the cat tribe. The messenger is able to carry the animal in the box back to its owner for interment, thus obviating the unpleasant task of handling the dead animal.



IODISED LIGATURE.

THE following is the method of preparing this ligature: Prepare a solution containing 1 per cent. each of iodine and potassium iodide, and soak the dry catgut in the solution for eight days. Before use the ligature is rinsed in boiling water. It is stated to be very tough, as strong as silk, and quite sterile. It is suggested that storing in alcohol after soaking in the iodine-water may be preferable.—*British Medical Journal.*

"By their corks ye shall know them" is the adage of a dispenser at a large public institution in the provinces. He asserts that the name of the successful drug-contractor to his institution can always be told by the corks used.

SINCE we all know that ill weeds grow apace, it is not surprising that enterprising farmers are introducing such roots as belladonna—the "Deadly Nightshade" in Mrs. Turner's tragic "Cautionary" ballad—into their rotation of crops. The following advertisement appeared recently—"BELLADONNA.—'Deadly Nightshade.'—For sale, about two tons.—Apply, etc." Drug-farming is now largely carried on in Hertfordshire and other districts, and this is the season of the belladonna harvest. Two tons or more of the green root make an average farm crop, and the value works out at about 2l. per cwt.—*Daily Mail.*

Personalities.

MR. RICHARD T. BAKER, Curator of the Technological Museum of New South Wales, is now on a visit to England.

MR. JOSEPH BEECHAM, of Liverpool, has sent to Sir Robert Hunter, General Post Office, through Mr. Thos. J. Barratt, 100/1, for the Hampstead Heath extension.

MR. T. W. THOMASON, of Brisbane, Queensland, will conclude his visit to England at the end of this month. He has been in London this week, looking very much the better for his holiday.

MR. A. PANAYOTOFF, representing the otto-of-rose syndicate of Karlovo (Syndicat des producteurs Bulgares), is at present in London on a business visit, and may be addressed, 27 Mincing Lane, E.C.

MR. F. M. MERCER (Townson & Mercer) has sent in his resignation as a member of the Court of Common Council on the score of failing health. He has represented the Ward of Bishopsgate since 1889, and has rendered excellent service in the cause of civic government.

LAST week the heads of departments of Messrs. Parke, Davis & Co.'s London branch dined together at the Criterion Restaurant, for the purpose of wishing *bon voyage* to the manager, Mr. F. M. Fisk, on the occasion of his departure on a visit to the United States. In addition to Mr. Fisk, Mr. J. L. Buell, from South Africa, was also a guest. Mr. W. F. Whelan occupied the chair, and a very pleasant evening was spent.

MR. ALFRED MUMFORD, pharmaceutical chemist, is retiring from business after what he describes as "fifty-eight years' close intimacy with pharmacy." He is perhaps best known from his long connection with the firm of Randall & Sons, Southampton, for whom he was manager till 1895, when he went to Emsworth. Chemists in every part of the world who have passed through Randall's will wish Mr. Mumford the enjoyment of his well-earned rest.

MR. JOHN C. HEWLETT, F.C.S., of Messrs. C. J. Hewlett & Son, Great Eastern Street, London, E.C., arrived at Johannesburg in good time to give Transvaal chemists the benefit of his experience as a manufacturer of spirituous medicinal preparations. Mr. Hewlett, we understand, took an active part in securing the decision arrived at by the Transvaal Treasury not to impose the 15s. per gal. duty on spirituous medicinal preparations, but to continue their importation on the terms agreed to at the Bloemfontein Convention.

THE LATE MR. WILLIAM WEIGHTMAN, whose death was recorded in our last issue, was born at Waltham Grange, Grimsby, on September 30, 1813, so that he had almost completed his ninety-first year. His father having moved to Grimsby, he left England to join his uncle, Mr. Farr, of Philadelphia (founder of the firm of Powers & Weightman), celebrating his fifteenth birthday on his passage out. Mr. Farr was also a Lincolnshire man, and was in partnership as a chemist with a German. On arrival in the States Mr. Weightman at once entered his uncle's business, the German chemist taking a special interest in him and encouraging him in his work. When the German retired, Mr. Weightman

and Mr. T. H. Powers were admitted into partnership with Mr. Farr, the firm being known as Farr, Powers & Weightman. After the death of Messrs. Farr and Powers, Mr. Weightman in 1879 succeeded to the business, and continued it for some years, until he associated with him his two sons, John Farr Weightman and William Weightman, jun., which co-partnership continued until

they died. After this Mr. Weightman carried on the business under the same firm-name until January 1, 1895, when he gave his son-in-law, Mr. R. J. C. Walker, an interest in it. Mr. Walker died in December, 1903. On January 1, 1904, Mrs. Anne M. Walker, his widow and Mr. Weightman's only remaining child, was admitted to the firm, and is now the only surviving member of it. In September last, on the completion of his ninetieth year, Mr. Weightman received an address signed by 432 employés, and another from about the same number of his employés at the Falls Laboratory. Notwithstanding Mr. Weightman's great age, he continued to take an active part in his business almost to the last, and was at his counting-house or laboratory every day between 8.30 A.M. and 1 P.M. Previous to a serious illness in 1892 he gave his entire time to the conduct of the business, being at his post from 6.30 A.M. to 6.30 P.M. daily. He was the largest individual real-estate owner and taxpayer in Philadelphia, to the adornment of which city he contributed largely during the past twenty-five years by the erection of many palatial residences, commodious warehouses, offices, and hundreds of less expensive modern houses. Mr. Weightman was never known to sell any real estate, but always held on to his purchases, improved them, and drew the rentals. Another trait of his was shown in the treatment of his employés, and those who were faithful workers he provided for in old age. His only surviving relative of the same generation now in England is a sister, Mrs. Simpson, of Louth, mother of Alderman Henry D. Simpson, J.P., who is a chemist and druggist and ex-Mayor of Louth. Mr. Weightman is survived by several grandchildren and great-grandchildren. It is stated that he has left a fortune of 10,000,000*l.*

Trade-marks Applied For.

Objections to the registration of any of the undermentioned applications should be lodged with C. N. Dalton, Esq., C.B. Comptroller-General of Patents, Designs, and Trade-marks at the Patents Office, 25 Southampton Buildings, Chancery Lane, London, W.C., within one month of the dates mentioned. The objection must be stated on Trade-marks Form J, cost £1, obtainable through any money-order office.

(From the "Trade-marks Journal," August 24, 1904.)

"CUBROME"; for photographic chemicals. By H. Edmund & Co., 3 Ezra Buildings, Columbia Road, Shoreditch, E. 264,542.

Device of a lion rampant; for photographic plates. By the Imperial Dry-plate Company (Limited), Askford Road, Cricklewood, N.W. 264,783.

Device of a sailing ship; for soft soap for use as an insecticide. By Price's Patent Candle Company (Limited), 31 Threadneedle Street, E.C. 265,948.

"R. M. LARER"; for a vermin-exterminator. By the Common-sense Manufacturing Company, 381 Queen Street, W., Toronto. 259,194.

"FORMAN"; for chemicals, and for surgical, etc., instruments. By K. A. Lingner, 2 Nosseneistrasse, Dresden. 264,432-3.

"ASTMOL"; for an asthma-cure. By D. Szamatolski, 46 Grosse Friedbergerstrasse, Frankfurt-am-Main. 264,538.

"ECZOLINE"; for an ointment for human use. By W. W. Hunter, 19b Regent Street, Swindon. 264,260.

"TEONOC"; for chemicals. By C. B. Leich, 44 Woodville Gardens, Langside, Glasgow. 265,158.

"ANTIRHEUMEN" ("Anti" disclaimed); for electric and magnetic surgical, etc., apparatus. By Cooper & Co., 219 Well Street, Birmingham. 264,009.

"MULTICO" ("Multi" disclaimed); for a photographic printing-paper. By E. J. V. Earle, 129 Queen Victoria Street, E.C. 261,608.

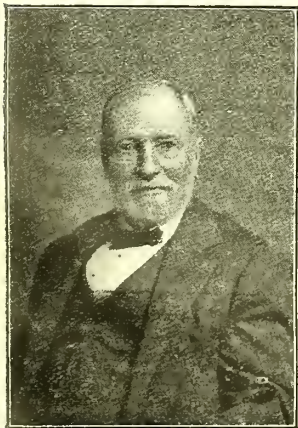
"VALENTI"; for a photographic paper. By the Leto Photo Materials Company (Limited), 9 Rangoon Street, E.C. 265,047.

"AMALINE"; for a toilet-preparation. By Pope, Roach & Son, 8 St. James's Street, S.W. 265,747.

"KAMA"; for a pomade. By Miss Mabel Manners, 146 New Bond Street, W. 264,302.

"DIXOLA"; for toilet-preparations. By Rowland Dixon, 673 Ecclesall Road, Hunters Bar, Sheffield. 264,888.

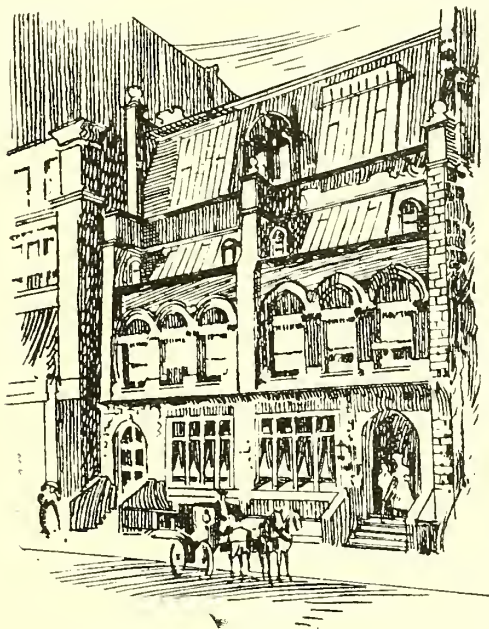
"BLAIRGOWRIE BOUQUET"; for a perfume. By J. D. Petrie, 7 High Street, Blairgowrie. 265,104.



Society of Chemical Industry.

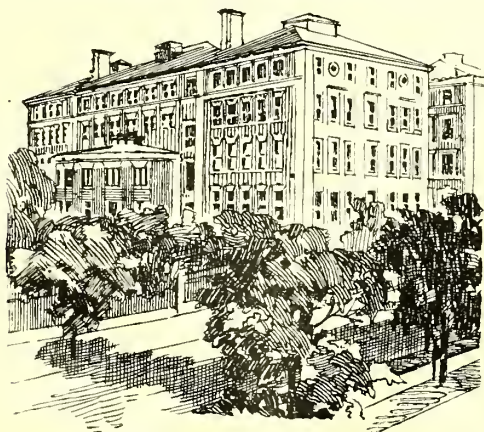
ANNUAL MEETING IN NEW YORK.

THE UNITED STATES has already given this Society a President in the person of Professor Chandler, D.C.L., of the Columbia University, New York; and that country again leads the way by, for the first time, attracting chemical technologists to a meeting within its borders which is not international in the sense that International Congresses of Chemistry and Pharmacy are. The Society of Chemical Industry has no national bias, pursuit of the



THE CHEMISTS' CLUB.

calling and ability to work therein being the basis of its membership. It has a branch in the United States, which has long wanted to entertain the members of the Society as a whole, and this year was selected as an unusually attractive one, the St. Louis Exhibition giving an opportunity of inspecting the World's Exhibits in Chemicals.



HAVEMEYER HALL.

Sir William Ramsay, K.C.B., F.R.S., D.Sc., is the President of the year, and the proceedings commenced at the Chemists' Club, West Fifty-fifth Street, New York, on Wednesday evening of this week, with an informal reception by the members of the local Committee. We cannot

give details, for this is written on the Eastern Side of the Atlantic under the guidance of a brief cabled message from our representative attending the meeting. He will report the matter fully by mail.

The meeting proper commenced on Thursday morning at ten o'clock, when the members of the Council gathered together at Havemeyer Hall, one of the buildings of the Columbia University. The Council arranged the programme of business and gave the last touches to the annual report; then accompanied the President to the general meeting of the members, held in the Gymnasium of the University. There prominent scientists and statesmen were present as guests, and after the official welcome Sir William Ramsay delivered his address.

The following is a list of

THOSE FROM THIS SIDE

who are attending the meeting:

- | | |
|---------------------------------------------------------|-----------------------------------------------------|
| *Ashwell, J. H., Nottingham. | *Leitch, Jno. W., and Mrs., Milnsbridge. |
| Bateson, Percy, and Mrs., Liverpool. | Leonard, W. J. and Miss, Hackney Wick. |
| Benham, Keith, Dean's Hill, Stafford. | Lewkowitsch, Dr. J. and Mrs., London. |
| Bird, W. R., and Mrs., Cardiff. | Litter, Hans, Dresden. |
| Bowley, J. P., Battersea. | Lowson, J. G. F., and Mrs., Edinburgh. |
| Boyce, F., Messrs. Goodall, Backhouse & Co., Leeds. | Mair, Wm., Edinburgh. |
| Brandeis, R., Aussig, Austria. | Markel, Dr. K. E., Warrington. |
| Broadbent, H., Messrs. Goodall, Backhouse & Co., Leeds. | Martin, Wm. H., and Mrs., Chelsea. |
| Brown, E. Hilton, St. Petersburg. | Messel, Dr. R., Westminster. |
| *Butler, W. Waters, and Mrs., Birmingham. | Miller, Wm. M., and Mrs., Penang, S.S. |
| Carey, Eustace, Liverpool. | Möhlau, Dr. R., Dresden. |
| Collens, Edward, Stourport. | Mole, H. B., Shepton Mallet. |
| *Collett, J. M., and Miss, Hillfield, Gloucester. | *Morson, T. D., Ponders End. |
| Conroy, Dr. Jas. T., Liverpool. | Muspratt, Max, and Mrs., Liverpool. |
| Coubrough, Col. Jno., Blenheim, Shropshire. | Packard, T., Bramford. |
| *Cresswell, C. G., Westminster. | Patterson, J., Workington. |
| Cuning, Jas., Junr., Melbourne, Vic. | Pearce, Sidney H., Johannesburg. |
| Davis, Saml. H., York. | *Perry, David, and Mrs., Lenzie. |
| Davis, H. W., Clement's Inn Passage, W.C. | *Platten, F., Selly Oak. |
| Erdmann, Dr. H., Charlottenburg. | Potter, Chas. J., and Miss, Heaton Hall. |
| *Fox, Thos., Wellington, Somerset. | Power, Dr. F. B., London. |
| Gent, Wm. T., and Mrs., Misterton. | Prideaux, E. B. R., Beckenham. |
| Greeff, R. W., Eastcheap, E.C. | Ramsay, Sir Wm. |
| Gyr, Dr. K. H., Ipswich. | Ratcliffe, Mrs., and C. F. (her son), West Dulwich. |
| Hacking, W. H. and D. H., Accrington. | Rawson, Christopher. |
| Hermisdorf, Dr. W., Chemnitz. | Reid, Walter F., Addlestone. |
| Hill, W. Basil, York. | Riley, Oliver, and Miss, Accrington. |
| Holden, A. N. and N. N., Miles Platting. | *Smetham, Alf., and Mrs., Liverpool. |
| Johnson, Thos. A. and Cedric, Northwich. | Trechmann, A. O., Rochester. |
| Joy, Dr. J. Holmes, Tamworth. | *Trewby, H., Clerkenwell, E.C. |
| Kane, R. W. H., Burton-on-Trent. | Tyrer, Thos., and Mrs., Stratford, E. |
| Kingdon, Holman, Warrington. | Wade, J. L., and Mrs., West Kensington. |
| | Waterhouse, Maj.-Gen. J., Eltham. |
| | Wayland, W. A., Brockley, S.E. |
| | Wheavill, C., Huddersfield. |
| | *Wilson, A. W., Hull. |
| | Wünsche, Fritz, Dresden. |
| | Zilz, Henry, London. |

We learn that during the voyage of the *Campania* to New York a team of British M.P.s in a tug-of-war beat a team of chemists by two pulls to one. The chemists who went by the *Campania* are indicated in the above list by asterisks.

AN INTERESTING INNOVATION is the compulsory course of pharmaceutical legislation at Nancy, M. Deglin (barrister at the Court of Appeal) being the professor. A similar optional course was instituted at the Paris School of Pharmacy, but failed, which fact may have induced the provincial authorities to make the subject compulsory.



TO CORRESPONDENTS.—Please write clearly and concisely on one side of the paper only. All communications should be accompanied by the names and addresses of the writers. If queries are submitted, each should be written on a separate piece of paper. We do not reply to queries by post, and can only answer on subjects of general interest.

State-aided Pharmaceutical Education.

SIR,—Rightly or wrongly, for good or ill, education, both elementary and secondary, has in these days become the care of the State. It may be delegated to local bodies, it may be partially paid for by students' fees, but broadly speaking it is a national institution and a public charge. In one comparatively poor county alone, the sum of 60,000*l.* has been named within the last few days as being necessary for the provision of secondary schools, although the young people for whom these are to be provided number only about a half per cent. of the population.

Manual schools for the teaching of handicrafts are conducted at a heavy annual loss. Instruction is given, or at least offered, to rural populations in ploughing, sheep-shearing, poultry-killing, and many other forms of "technical" training. Classes are held in lace-making and cooking, in dressmaking and other domestic arts. Money is lavished freely in all directions—with what results, time alone will show.

It is not surprising, therefore, that an enthusiastic Scotchman, who has had much to do with public educational work in the northern county famous for its poor scholars, should have put in a strong plea for the recognition of pharmacy as a suitable subject for technical instruction, and for pharmaceutical students as eminently fit persons for official encouragement. His somewhat unfair criticism of the Pharmaceutical Society as a body, which has done practically nothing educationally for students, should not be allowed to detract from the gratitude due to Mr. Paterson for the zeal and ability which he has devoted to this subject.

The chief fault of his scheme would seem to be in the modesty of his demands. There is no need to appeal to the Pharmaceutical Society or to local Associations to guarantee part of the cost of providing educational facilities. In England, at least, in practically every city and large town there are university and other colleges, technical schools, and the like, the governing bodies of which are anxious to meet any demand that may arise. Local rates and grants from the national exchequer, such as the "local taxation (Customs and Excise) duties" (vulgarly known as the "whisky-money"), are continually devoted to technical education, and in many cases, as may be seen in the Educational numbers and advertising columns of *THE CHEMIST AND DRUGGIST*, pharmacy and the kindred sciences are included under this heading. State-aided and rate-aided pharmaceutical education is therefore an accomplished fact. It rests with parents, with pharmacists, and with their pupils to use the facilities provided, before they clamour for more. A parent is hardly fit to be called a guardian if, before signing his son's apprenticeship indentures, he does not stipulate for leisure and opportunity to be given for theoretical training. A master worthy of the name will not hesitate to grant such, for in the stress and strain of modern commercial life it is becoming daily more true that "the employer fit to teach has no leisure to do so." Apprenticeship will always be essential; there must be no divorce between precept and practice, "no division between the work of the artist and the artisan: the best work has always been accomplished when these two were one."

Pharmacy studied only in the lecture-room and experimental laboratory, like nature looked at only down a microscope-tube, will never be understood. Technical education must not be given solely by teachers the terms of whose appointment separate them from industry, who perhaps even learn to look down upon those who are actually occupied in practising the very application of science to industry which they preach. But a concurrent

combination of practical work with academic teaching approaches the ideal. State-aided education will probably lead to more public recognition, and may be better even than State control or protection.

Yours faithfully,

Exeter, September 6.

H. WIPPELL GADD.

Citronella Grass in Ceylon.

SIR,—With reference to the interesting article by Mr. C. J. Sawyer appearing on page 179 of your issue of July 30, 1904, permit me to make a few observations.

In the first place, Mr. Sawyer quotes the account of this grass in Trimen's "Handbook of the Flora of Ceylon," Vol. V., evidently under the impression that Dr. Trimen was the author of that volume. This is not the case; the late Dr. Trimen left no notes on grasses, and only a very poor collection in the herbarium at Peradeniya. Sir Joseph Hooker wrote the last two volumes of the "Flora" (see his remarks in the Preface to Part IV.), and is responsible for the statements there made: his account of the grasses is very incomplete in detail for the reason above explained. On page 180 Dr. Trimen is again used as an authority to dispute the statement, which is perfectly correct, that there are two forms cultivated in Ceylon. This authority is, as shown, valueless; it rests only on the fact that our herbarium as sent to Sir J. D. Hooker contained only one specimen of citronella grass. I have devoted a good deal of attention to the citronella oil question in recent years, and large plots of these grasses are now in cultivation on the Peradeniya Experiment Station. Full reports will be issued by this Department at a later date. In the meantime, let me assure you that there are two cultivated forms in Ceylon, called *Lena Batu* and *Maha Pangiri* respectively. A good account of them is given in Messrs. Schimmel & Co.'s "Semi-Annual Report" for October, 1898. *Lena Batu* is the form cultivated by the native growers, and furnishes practically all the exported oil. *Maha Pangiri* is the form cultivated by Messrs. Winter & Son at Baddegama, and gives a much finer oil, but needs more trouble in cultivation, having to be frequently replanted. The native prefers the *Lena Batu* because he does not need to replant it. He frequently abandons the cultivation when the grass is ten years old or more. The wild *Andropogon Nardus*, one of our most common grasses, is known to the Sinhalese as *Mana*, and is distinct from the cultivated forms; it yields a good oil, but the quantity is smaller. Lemongrass is also cultivated in Ceylon, and we have a considerable quantity of it upon the Experiment Station at Peradeniya.

I am, Sir, yours faithfully,

JOHN C. WILLIS, Director R.B.G.

Royal Botanic Gardens, Peradeniya, August 15.

What is Extractum Aconiti?

SIR,—Having read with interest the letter of Dr. McWalter on this subject, I wish to draw attention to his statement that the only extract described in "Squire" is the ext. aconiti radialis alcoholicum, of which the dose is stated to be from 2½ to 2½ grains. If Dr. McWalter will look up Squire's "Companion" (17th Edition) and Squire's "Pocket Companion" he will find the dose to be from ½ to ½ grain (0.01 to 0.03 gram). There it is also mentioned that the extract must not be confounded with ext. aceniti, B.P. '85, which was much weaker.

Yours,

M.P.S.I. (233/31.)

SIR,—By some error, the figure 2 got inserted before the fractions stating dosage of ext. aconiti. This makes it read rather funny. It should read "ext. aceniti gr. ¼."

J. C. MCWALTER.

Beecham's Pills in Ireland.

SIR,—It is not generally known that Messrs. Beecham now sell their pills unstamped in Ireland, and that they not only charge Irish chemists the same price for the unstamped as the stamped pills, but refuse to supply them with the latter when they are demanded and the money is offered for them. Now, the unstamped pills are described by Beechams as 13½*d.* boxes, and they are got up so similar to the stamped ones that many persons whom we have questioned on the subject believed that the unwrapped box bore the ordinary Government stamp, and that they were paying 1½*d.* for it. As Dublin in particular abounds

in Inland Revenue and other Civil servants, we began to fear that we might be open to a charge, and we have therefore thought it necessary to ask the Solicitor for Inland Revenue whether, in the circumstances, we should be legally safe in selling the pills bearing the band which is not a government stamp. That gentleman apparently considers the question too important to reply to on his own authority, and he states that it is now under the consideration of the Commissioners of Inland Revenue. Pending the reply it would obviously be safer if retailers in Ireland sold only the stamped pills, which they can obtain from the English wholesale houses.

Yours truly,
Dublin and Belfast, August 27. J. LEONARD & Co.

The late James Bronte.

SIR.—This young man came from New Zealand recently with his family. His father is a L.P.S.I., and was in business (I believe in Belfast) in Ireland, and about eighteen years ago migrated to New Zealand, where he successfully carried on a chemist's business in Wellington. They are distinctly Irish people. The father and mother accompanied their sons to South Africa, and I know them both. So far as I know there is nothing to connect them with Haworth, Yorkshire.

W. B. RAWLINSON.

Jeppes Town, Johannesburg, August 15.

[This is a reply to the "Notes and Queries" inquiry as to whether Mr. Bronte was a relation of Charlotte Brontë. Mr. John Bronte is still on the Irish Register of Pharmaceutical Chemists, and Mr. R. M. Bronte is another L.P.S.I., whose address is given as in Armagh.—ED.]

Old Mortar and Pestle.

SIR.—I have recently had submitted to me a query anent a Yorkshireman who sailed from England in the *Mayflower* in 1620—viz., Major William Bradford, who was the second Governor of Plymouth, Mass., U.S.A. Either this gentleman, or Governor Edward Winslow, took with him from England, in 1620, a mortar and pestle which is, or was, in the Museum of the Pilgrim Hall, Plymouth, U.S.A. Can any reader inform me which of these gentlemen owned this mortar and pestle and give me a description of it, saying at the same time what inscription (if any) it has on it?

Faithfully yours,

CHAS. F. FORSHAW.

"Yorkshire Notes and Queries" Office, Bradford,
September 5.

A Question in Orthography.

SIR.—In the British Pharmacopœia 1885 the plural of alkali is given as "alkalies," and in the 1898 "alkalis." See under Antim. Tart., Liq. Bismuthi, and Thymol. Which spelling is correct? I still retain painful recollections of a certain rule that was taught in my schooldays: "Nouns in i and o, preceded by a consonant, form the plural by adding es; as hero, heroes; alkali, alkalies." Is this rule now obsolete?

WILD UN. (24/96.)

From a Welsh Customer.

SIR.—The following copy of an order which I received the other day may possibly add to the numerous amusing yet pathetic things which the retail chemist has to endure. I may say the prices referred to are quoted in ounces and pounds.

Sincerely yours,

PESTLE. (215/41.)

Metol, 40 grains	...	...	...	...	2½
Hyrokinone, 50 grains	...	...	...	...	1½
Sulphite of soda, 120 grains	...	...	...	...	1½
Bromide of potassium, 15 grains	...	...	...	...	3
Caustic potash, 180 grains	...	...	...	...	4½
					5

DEAR SIR.—I put the prices of above items according to your catalogue. When the amount came to the fraction of a penny less than a ¼d. I put ¼d. The total then comes without any fractions and also without any loss to you. Will you put each item in a separate packet and label it?

The Look-out.

SIR.—"There is a tide in the affairs of men"—whether they be individuals or societies—"which taken at the flood" "leads on to fortune," and such a flood-tide appears evident in the affairs of the chemist and druggist. This position has been achieved mainly by the literature emanating from 42 Cannon Street, infusing a vital force into every department and in the most remote parts of the world.

This literature is of a permanent character, and is a power by means of which the position of the old apothecary, may possibly be regained, and thus compensate the labouring dispenser for his care and skill in ameliorating "the ills that flesh is heir to." That thorough-hearted and talented physician Sir B. Ward Richardson was always willing to exchange ideas with an intelligent chemist, and even proposed that he should be entitled to an examination and a licence to practise the healing art. The Medical Council, however, refused to entertain the idea. I would suggest that prominent pharmacists of all grades should form an association for the promotion of physiology and pathology. Why not aim at the distinction now the tide is at full?

Yours faithfully,

EXPERIENTIA. (227/24.)

Legal Queries.

Labels to be marked "Liable" or "Not liable" to medicine stamp-duty should be sent to the Editor in duplicate and with a stamped and addressed envelope for return of the marked ones, if desired.

234/9. *R. P.*—A telephone company have no right to fix their wires to a private house, and if they do so without permission of the proprietor or occupier they are compelled, on forty-eight hours' notice, to remove them.

228/20. *T. W. H.*—We should think it is doubtful whether the vendors will really fight such a case as you put before us, but if they do your solicitor will be able to advise you.

225/42. *Chemicus*.—Pills containing ergotin can only be sold under the conditions of Part 1 of the poisons schedule. The sale of the female pill described may be an infringement of the Offences to the Persons Act, and is if sold to pregnant women or for use by them.

228/59. *H. & B.*—The word "Dento" is not registered as a trade-mark, and we question if it can be, seeing that it is descriptive. The official fee for registering an unopposed mark is 25s. See *C. & D. Diary*.

235/43. *Institute*.—The advertisement which you quote is not, when used by an unregistered man, an infringement of the medical titles protected by the Medical Acts; but such a person practising as described in England would infringe the Apothecaries Act.

228/49. *J. T. H.*—You will find all about the Shops Act in recent issues. If you read the *C. & D.* more attentively, you would not put such ridiculous questions.

228/64. *H. D.*—Mathematics is an essential subject in all Medical Preliminary examinations in the United Kingdom.

Miscellaneous Inquiries.

We endeavour to reply promptly and practically to trade questions of general interest, but cannot guarantee insertion of replies on a particular date, nor can we repeat information given during the past twelve months.

192/38. *Oxford*.—The Sausage-flavourings are too complex to give anything more definite than what is suggested by physical examination. The "special" flavouring contains powdered cinnamon-bark. A very good formula is

White pepper	...	...	8 oz.
Jamaica pepper	...	...	3 oz.
Black pepper	...	...	1½ oz.
Ginger	...	...	1½ oz.
Capsicum	...	...	1 oz.
Mace	...	...	½ oz.
Cloves	...	...	40 grains

All in fine powder.

200/51. *Veto*.—(1) **Abortion in Cows.**—The violet-coloured solution used as an injection is a solution of permanganate of potassium (about a grain to the ounce). There are also indications of bichloride of mercury. (2) The **Emulsion** for uterine calculi in cattle has a composition like the following:

Ether	...	...	4 dr.
Linseed oil	...	...	12 oz.
Oil of turpentine	...	...	1 oz.
Tincture of opium	...	...	1 oz.

Mix for one dose.

207/36. *W. G.*—The sample of boric acid you send is a crude drug containing appreciable quantities of iron and sulphates, but for preventing the mildew in cotton caps would advantageously be replaced by the pure acid.

254/74. *A. A. S.*—(1) The **Office Paste** consists of a stiff starch paste preserved with formalin, with a small quantity of tragacanth. (2) The **Blue-black Ink** owes its colour to methyl blue.

222/74. *G. C.*—**Linen-gloss.**—This is a mixture of French chalk and powdered soap with a small quantity of powdered paraffin wax. The proportions are as follows:

Powdered soap	...	...	2 parts
French chalk	...	...	2 parts
Paraffin wax	...	...	$\frac{1}{2}$ part

179/37. *X. T. Z.*—The **Ointment for Pruritus** is best imitated by the following formula:

Bismuth. subchlor.	...	...	3j.
Liq. carbonis deterg.	...	...	xxx.
Lanolin. ad	...	...	3j.

22/71. *Yorkshire.*—The sample of **Beetle-paste** contains phosphorus, powdered squill, and oatmeal. The method of making it was probably to dissolve phosphorus in melted lard and pour the phosphorised lard into the mixture of meal and squill.

195/73. *Amicus.*—**Boot-polish.**—This we find to have as a basis a borax solution of shellac, but there is a good proportion of spirit present, which allows the use of a little sandarac. This addition would improve the polish as a finish for glacé kid.

216/30. *Rabbit.*—The **Powder for Snuffles** in rabbits is a mixture of alum and nitrate of potassium in about equal quantities.

219/29. *Ware.*—In a recent case it was stated that "capsuloids" contain an entire drug—viz., hæmoglobin—with a little mineral oil. See *C. & D.*, May 7, 1904, page 736.

211/1. *Alpha.*—If you use some inf. rosæ conc. in your cough-mixture, you will get the result you desire.

203/31. *A. J.*—Please explain exactly what you require. There are many ways of producing coloured photographs.

205/36. *S. B.*—(1) We cannot say. (2) The best remedy for **Roup in Poultry** is the following pill given night and morning:

Hydrargyri subchloridi	...	...	gr. j.
Pulv. antimoniales	...	...	gr. j.
Pulv. glycyrrhizæ	...	...	gr. j.
Copaibæ	...	...	q.s.

Fiat pilula.

(3) A good **Poultry Liver-pill** is made as follows:

Res. podophylli	...	...	gr. $\frac{1}{2}$
Pil. rhei co.	...	...	gr. ij.

Fiat pilula.

(4) Messrs. Parke, Davis & Co. make a black-leg vaccine. You can get all particulars from them.

216/66. *Heroin.*—We cannot undertake to find out for subscribers what words are registered as trade-marks, or to select for them names for specialities. As a rule it is advisable to associate the name of the maker with the preparation.

206/32. *H. B. R.*—**Manufacture of Lakes.**—Consult either of the following works: Hurst's "Painters' Colours, etc." (J. Griffin & Co.), or Jennison's "Manufacture of Lake-pigments" (Scott, Greenwood & Co., 7s. 6d.).

216/39. *Con.*—**Waterproof Glue:**

Gelatin	...	...	4 oz.
Water	...	...	4 oz.
Acetic acid	...	...	6 oz.

Soak the glue in the water and dissolve in the acetic acid by heat. Strain into a black glass bottle, and stir in a solution of ammonium bichromate griss. in water griss. Keep in the dark.

212/64. *Ernestus.*—The grittiness of the ointment is due to separation of the wax. This is best avoided by cooling the preparation slowly and stirring constantly until it is thick.

201/19. *A. K.* (Calcutta).—Breadmaking is not at all in our line, and we cannot advise you in your difficulty. Write to the makers of the apparatus.

212/18. *J. E. S.*—**Kieselguhr** is a diatomaceous earth found in the North of Scotland, in Germany, and elsewhere. It consists almost exclusively of silica. Dynamite is a mixture of it and nitroglycerin. Its other most important use is as a filtering-medium.

212/36. *J. W. H.*—(1) Our examination of the hair-dyes indicates that they are not of the composition stated in "Pharmaceutical Formulas," the colouring principles being leuco-compounds. We are not yet prepared to give working formulae. (2) **Rat-poisons** containing strychnine should be free from arsenic, and are not much improved by the inclusion of barium carbonate.

217/65. *Hibernia.*—(1) Silicate of soda is used for water-paints. (2) The setting of plaster of Paris cannot be delayed without diminishing its utility as a cement. (3) Chinese wax is not so good as beeswax for furniture and boot creams. Carnauba wax is useful, but not by itself.

218/56. *J. B. W.*—Cocaine hydrochloride is the safest local anæsthetic to be administered hypodermically for dental purposes. The dose for adult males is $\frac{3}{4}$ grain dissolved in 10 minims of water. One-half is injected into the gum in front of the tooth, and a minute or two after the other half at the back.

Information Wanted.

Postcard replies to any of subjoined inquiries will be esteemed.

- 231/42. Makers of "Health" dog-biscuits.
- 235/53. Who makes corn-files with bone handles?
- 236/54. Who are the makers of "Frog" charcoal tablets?
- 236/58. London agents for soaps made by Jurgens, of Cincinnati.
- 234/66. Who are the makers of self-wringing mops retailing at 2s. 6d. each?
- 236/31. A subscriber wants to buy the following from the makers: Truman's nursery hair-lotion, "Zodiac" ointment, Oxley's essence of ginger, and Fels' reducing tablets. What are the addresses?
- 124/96. Who are the makers of Rub-white tooth-paste or tooth-powder?

Business Changes.

Properly authenticated business notices (not being advertisements) are inserted in this section free of charge if promptly communicated to the Editor

MR. T. T. THOMSON, chemist, has reopened the premises at 65 Caledonian Road, Islington, N.

MR. C. S. ASHTON, chemist and druggist, has bought the business of Mr. M. Leigh, at 46 Dyke Road, Brighton.

MESSRS. CARR & Co., of Brighton, have purchased the business of Mr. Alfred Mumford, pharmaceutical chemist, at Emsworth, Hants.

MR. R. H. LLOYD has opened a business at 25 New Bridge Street, Newport-upon-Usk, under the style of "Lloyd's Drug-stores."

MR. A. J. SLACK, formerly of Walmer Road, Notting Hill, W., has opened the Abbey Wood Drug-stores at 12 Station Road, Abbey Wood, S.E.

MESSRS. HOWARD & Co. (LIMITED), chemists and druggists, have opened an entirely new up-to-date, attractive, and well-fitted pharmacy in Broad Street, Reading.

MR. JOHN ETTLES, chemist and dentist, High Street, Sheerness-on-Sea, has completed extensive and important alterations and additions to his pharmacy, a notable feature being the fine double-fronted window.

MR. J. MILNER, chemist, 85 Woolwich Road, Greenwich, has opened a new pharmacy, which he will carry on on store lines, at 209 Trafalgar Road, Greenwich. Mr. Milner will in future make his headquarters at the new shop, and carry on his old shop as a branch.

Trade Report.

NOTICE TO BUYERS.—The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers stock the goods. Qualities of drugs and oils vary greatly, and higher prices are commanded by selected qualities even in bulk quantities. It would be unreasonable for retail buyers to expect to get small quantities at anything like the prices here quoted.

42 Cannon Street, London, E.C., September 8.

BUSINESS in drugs and chemicals this week has been moderately active, but the long-anticipated improvement which was expected in the autumn has not yet come about. With the exception of a good business in American and Japanese peppermint oils, the changes have been of a minor character. Quinine is flat, the large bark-shipments for August having exceeded anticipations. Opium is almost a dead letter so far as London is concerned, and it is thought there will have to be a reduction in morphine and codeine ere long. Rio ipecac has been dealt in to a fair extent, and rather firmer prices are now asked. Famine prices are asked for new Russian cantharides. Ergot is perhaps not so firm as it was, and Belgian chamomiles are a shade easier. Coriander-seed continues to advance, and horehound is dearer. Menthol is offered at last week's reduced prices, and lime-juce is plentiful and cheap. In chemicals, copper sulphate has advanced, and acetic acid is firmly held. Citric and tartaric acids and cream of tartar are extremely slow of sale. Subjoined are the principal alterations of the week :

Higher	Firmer	Easier	Lower
Cantharides	Galls (Persian)	Chamomiles	Menthol
Cocoa-butter	Nutmegs	Cloves (Zan.)	Oil, turpentine
Copper	Oil, pepper	Ergot	
sulphate	mint (H.G.H.	Lime-juice	
Coriander	and Jap.)	Podophyllum-	
Horehound	Pepper, white	root	
Mace (W.I.)		Wax	
Rhatany		(Japanese)	
Sassafras			

Cablegrams.

SMYRNA, September 8:—The opium-market is steady, and further sales on speculative account have been made.

HAMBURG, September 8:—Coriander and fenugreek seed are dearer. Refined camphor and turpentine oil are dull, and for Japanese dementholised peppermint oil 12½m. per kilo. has been paid.

Java Quinine Tender.

The result of the tender held on September 7 at Batavia is as follows: Of 7,770 kilos. Ed. II. offered 3,745 kilos. were sold at an average of 16½fl. per kilo. (about equal to 6c. per Amsterdam unit), against 16½fl. per kilo. at the previous tender. The next tender to be held at Batavia will take place on October 12.

Heavy Chemicals.

Since last writing business in the heavy-chemical market, at any rate for early requirements, has been of a quiet nature, and deliveries too on both home and export account have been on the low side. A very moderate business has been done on forward account, and especially so in bleaching-powder, but the greater portion of next year's requirements in most products remains still to be covered. There have been only few fluctuations of particular moment in values, and the great majority of products are steadily maintained at late figures.

SULPHATE OF AMMONIA has been quiet in tone, with little doing for early delivery. Present nearest values are as under, but for forward and the early part of next year higher prices are quoted: Beekton 11l. 18s. 9d., Beekton terms 11l. 12s. 6d., London 11l. 17s. 6d., Leith 11l. 15s., and Hull 11l. 12s. 6d. to 11l. 13s. 9d.

BROWN ACETATE OF LIME has advanced appreciably, and with scarcity and good demand prices rule very firm. About 5l. 15s. to 6l. 5s. per ton, c.i.f., represents value.

ALKALI-PRODUCE.—Bleaching-powder for prompt is dull. For forward good orders have been booked, and quotations rule from 4l. 7s. 6d. to 4l. 12s. 6d. per ton for softwood casks on rails, according to circumstances. Caustic soda is in fair request, and is steady at unchanged rates for both prompt and forward: 76 to 77 per cent. 10l. 10s. to 10l. 12s. 6d. per ton, 70 per cent. 9l. 15s. to 9l. 17s. 6d., and 60 per cent. 8l. 15s. to 8l. 17s. 6d. Ammonia alkali keeps in steady demand, and late figures of 4l. 10s. to 4l. 15s. per ton, free on rails at works, are maintained for prompt and next year. Soda crystals are somewhat variable, but in about average request: Tyne 57s. 6d. to 62s. 6d. per ton, free on rails or free on board, and Liverpool 67s. 6d. per ton, f.o.b. Bicarbonate of soda unchanged at 6l. 5s. to 6l. 10s. per ton in casks, and 6l. 12s. 6d. to 6l. 17s. 6d. per ton in 1-cwt. kegs, f.o.b. Liverpool. Saltcake has well maintained its strong position, and good business has already been done for forward while inquiry continues brisk: 35s. to 40s. per ton in bulk, free on rails, according to circumstances, represents the position. Chlorates of potash and soda are fairly firm for this and next year, at 3d. to 3½d. per lb. Yellow prussiates of potash and soda are on the quiet side, but are steady at about 5d. to 5½d. and 3½d. to 3¾d. per lb. respectively. Glauber's salts in request and firm at 35s. to 37s. 6d. per ton, free on rails in bags. Hyposulphite of soda is firm in tone at unchanged rates, but higher figures are far from improbable: 6 to 8 cwt. casks 5l. to 5l. 10s. per ton, and 1-cwt. kegs 5l. 15s. to 6l. 15s., according to quality and quantity. Silicates of soda are in fair demand, and vary in price according to quality, quantity, and destination: 140° Tw. 4l. 2s. 6d. to 4l. 12s. 6d. per ton, 100° Tw. 3l. 12s. 6d. to 4l. 2s. 6d., and 75° Tw. 3l. 5s. to 3l. 15s., f.o.b. Tyne or Liverpool in usual casks.

Liverpool Drug-market.

Liverpool, September 7.

BEESWAX.—Several transactions have taken place in Chilean at from 7l. 5s. to 8l. 5s. per cwt., according to quality.

CARNAUBA WAX.—Rather flatter, though grey is held for 125s., and yellow for 145s. per cwt.

CASTOR OIL.—The *Historian* has arrived with 850 cases, but there is no change in the price. All stocks are firmly held at 2½d. per lb., but possibly a bid of 2¼d., ex quay from the *Historian*, might be entertained. First-pressure French is almost wanting, owing to the strike in Marseilles.

CITRIC ACID.—Foreign agents require 11½d. to 11¾d. per lb.

COD-LIVER OIL.—Several transactions in Newfoundland oil have been made at 4s. 6d. per gal., but most holders require 5s. 6d. to 6s.

ERGOT.—Hamburg agents are now quoting 1s. 10d. per lb., c.i.f.

HONEY.—Liquid Californian has been sold at 40s. per cwt.

German Drug-market.

Hamburg, September 6.

Our drug-market in general is quiet, and only a few articles meet with interest from buyers.

ALOE is quiet, Cape being quoted 75m. per 100 kilos.

ANTIMONY is unaltered, at 27m. per 100 kilos.

CAMPHOR.—Refined is quiet, second-hand holders asking 500m. per 100 kilos.

CANTHARIDES is very firm, Russian offering at 900m., and Chinese at 310m. per 100 kilos.

CITRIC ACID is quiet, at 222m. per 100 kilos.

ERGOT is firm, at 365m. for Russian and 375m. per 100 kilos. for Spanish.

FENUGREEK-SEED is firmer, at 17½m. to 18m. per 100 kilos.

GUINEA-GRAINS are quoted 87m. per 100 kilos.

GOLDEN-SEAL is scarce and firm, at 1,400m. per 100 kilos.

IPPECACUANHA is very scarce. Stocks of Rio are estimated about 700 kilos. only, and of Cartagena very little is offered. Rio is quoted 10½m., and Cartagena 9½m. per kilo.

LYCOPodium.—Spot stuff very scarce, at 720m. per 100 kilos., in cases.

MENTHOL is quiet on the spot, at 27m. to 26m. per kilo.

QUININE is quiet, second-hand holders offering at 31m. per kilo.

SENEGAL is firm, Western offering at 710m. per 100 kilos.

WAX is quiet; Japanese can be had at 110m. on the spot, and Carnauba is flat, with grey at 240m. per 100 kilos.

WORMSEED is firm, at 110m. per 100 kilos.

OILS (FIXED).—Castor is quiet, first-pressing in barrels offering at 43m. per 100 kilos. Cod-liver is quiet at 155m. per barrel for non-congealing oil; Linseed and Cotton are advancing.

OILS (ESSENTIAL).—Star-aniseed is quoted at 11m. per kilo. Peppermint is firmer, H. G. H. being quoted at 16½m. per lb. and Japanese 11½m. per kilo. on the spot.

ACID, ACETIC.—Owing to the advance in raw material the market keeps firm, and the outlook for higher prices is now more favourable than it has been for many years past. When the present contracts have terminated makers will

have to base their quotations on the higher values of acetate of lime, which will mean higher prices for the acid. For B.P. quality (99 to 100 per cent.) 29s. to 30s. is quoted, and *glacial* 1s. less; other strengths being in proportion.

ACID, CITRIC.—Foreign is quiet at 1s., and English at 1s. 0 $\frac{3}{4}$ d. per lb.

ACID, TARTARIC, is flat, at 11 $\frac{1}{2}$ d. per lb. for foreign, and 1s. for English.

ALMONDS.—An advice from Messina, dated August 31, states that first arrivals of new crop have taken place, causing a slight decline. Sicily this year will export very little, as the poor reports concerning the crop are fully confirmed. P. and G. sweet are quoted 70s. 6d., and bitter 74s. for prompt, and 75s. and 80s. respectively for September-October shipment; current Avola is 81s., and choice 87s. 3d. per cwt. of 50 $\frac{3}{4}$ kilos., f.o.b., for September-October shipment.

ALOES.—The exports from Cape Colony during 1903 amounted to 327,772 lbs. (3,381 $\frac{1}{2}$), against 300,757 lbs. (2,040 $\frac{1}{2}$) during 1902—an increase of 27,015 lbs.

ANISEED.—Russian on the spot is held for 20s. and for Spanish the value is about 34s.

ANGOL.—The exports from Cape Colony during 1903 amounted to 88,334 lbs. (1,675 $\frac{1}{2}$), against 62,964 lbs. (1,234 $\frac{1}{2}$) in 1902.

ARROWROOT.—Quiet in auction, 135 packages St. Vincent being bought in at from 2d. to 3d. per lb.

BELLADONNA-ROOT.—There is a scarcity of good foreign root, and for common quality offered from the Continent prices are asked much above buyers' ideas.

BENZON.—There has been a fair demand privately for Sumatra at between 6l. and 7l. per cwt., several parcels offered in auction last week having been sold. Palembang is slow of sale, at 52s. 6d. About 9 cases of Siam have arrived this week, but no Sumatra.

BRCT.—The exports from Cape Colony during 1903 amounted to 262,454 lbs. (8,055 $\frac{1}{2}$), against 161,570 lbs. (4,755 $\frac{1}{2}$) in 1902, or an increase of 100,884 lbs. These figures are taken from the official Customs returns just issued.

CANTHARIDES.—As yet there is no definite news concerning the new crop of Russian, and prices are uncertain at the moment. In one quarter the extreme price of 5s. 6d. per lb. has been quoted for genuine Russian flies, but this price is not entertained.

CHAMOMILES.—While there is no appreciable alteration in prices, the tone is perhaps hardly so firm as it was. Good new Belgian flowers can be had at 80s. on the spot, and perhaps a trifle less for quantity; old flowers have been sold at 60s.

CHIRETTA is obtainable at from 5d. to 6d. per lb., according to holder.

CINCHONA.—The shipments from Java to Europe have been as follows:

August.			
	Amst. lbs.		Amst. lbs.
1904 ...	1,525,000	1898 ...	1,047,000
1903 ...	1,100,000	1897 ...	697,000
1902 ...	1,357,000	1896 ...	979,000
1901 ...	1,067,000	1895 ...	697,000
1900 ...	977,000	1894 ...	853,000
1899 ...	1,200,000	1893 ...	636,000
Total Shipments, January-August.			
1904 ...	8,855,000	1898 ...	7,136,000
1903 ...	8,120,000	1897 ...	4,931,000
1902 ...	8,396,000	1896 ...	6,029,000
1901 ...	7,524,000	1895 ...	5,013,700
1900 ...	5,724,000	1894 ...	5,554,000
1899 ...	7,230,800	1893 ...	5,376,000

COCOA BUTTER.—In auction prices advanced $\frac{1}{4}$ d. per lb., 70 tons of Cadbury's A brand selling at from 11 $\frac{3}{4}$ d. to 1s. 0 $\frac{1}{4}$ d. per lb. At the Amsterdam auction on September 6, 75 tons of Van Houten's sold at 67c. to 67 $\frac{3}{4}$ c. (average price 67.45c.), against 67.30c. paid at the previous auction. Eight tons de Jong sold at 63c. to 64 $\frac{1}{2}$ c., and of 12,700 kilos. Mignon offered, 8,880 kilos. sold at 63c. to 63 $\frac{1}{2}$ c.

COPPER SULPHATE.—An advance of 5s. per ton has taken place in ordinary brands of sulphate, which are now quoted 19l. per ton, and for finest quality 19l. 15s. is quoted. For

forward delivery prices are higher, at 20l. 5s. for January-February; and in Liverpool 20l. is quoted for prompt, and 20l. 5s. for January-April delivery.

CORIANDER-SEED.—A considerable advance has taken place this week; 30s. per cwt. has been paid, and 32s. 6d. is now asked for new or old seed. It is quite possible the market will still further advance, as most dealers are bare of supplies.

CREAM OF TARTAR is steady, at 79s. per cwt. for 95 per cent., 81s. 6d. for 98 per cent., and 82s. 6d. per cwt. for 99 per cent. to 100 per cent.

DRAGON'S BLOOD.—Fine fiery lump, which is extremely scarce, is held for 10l. 10s. per cwt.

ELEMI.—An arrival of 30 large cases has taken place.

ERGOT.—The s.s. *Magdalena*, from Vigo, has brought 58 bags. On the spot several sales of Russian have been made at about 1s. 8d. and for shipment 1s. 7 $\frac{1}{2}$ d. c.i.f. is quoted from Hamburg. Spanish is held at 1s. 10d. on the spot, and it is even said 2s. 1d. c.i.f. has been paid for new Spanish to arrive.

GALLS.—A few bags of Persian blue have been sold at rather higher prices, and green have also changed hands for forward delivery in a small way.

GAMBOGE.—Eight cases have arrived this week, partly good bright Siam pipe, and partly ordinary rough Saigon. There are several inquiries, the market being firm. After the sale last week a case of good Siam pipe was sold at 17l. 7s. 6d. per cwt.

GLYCERIN.—The market for *Crude* glycerin is weak for prompt delivery, and for forward it is said makers are unwilling to quote.

GUAIACUM.—Nineteen casks of good glossy block have arrived this week.

GUM ARABIC.—There is a fair inquiry for so-called insoluble Persian gum, but nothing is on offer at the moment.

GUMS (VARNISH).—At auction good qualities of Kauri were scarce. *Animi* was in large supply, and all bought in. A fair quantity of *Uopal* sold, mostly, lower qualities, at steady prices.

HONEY.—Sales of fine pale liquid Californian are reported at 40s. per cwt. New English and Irish honey of fine quality is arriving in limited quantities.

HOPS.—According to the annual report of a leading factor, who has made an exhaustive examination of the English hop gardens, the crop will not exceed 300,000 cwt. this year, owing to a severe and persistent attack of aphid blight. The general quality will, however, be very good on account of the brilliant weather and high temperature of the past two months. Prices are likely to be high, as stocks everywhere are small, and the Continent and U.S.A. are likely to send us less than usual.

HOREHOUND is dearer, at about 18s. per cwt.

IODINE.—The s.s. *Amasis*, from Iquique, has arrived in London with 62 barrels.

IODOFORM.—The present price of English make ranges from 13s. 10d. to 14s. 1d. per lb., net, according to quantity.

IPECACUANHA.—The s.s. *Magdalena*, from Montevideo, has brought 12 bales. Since the auctions about 35 packages have been sold at rather improved prices, the principal holders now asking 4s. 6d. per lb. Some small sales of Cartagena have been made privately at about 4s. 3d. per lb. About 22 packages of Johore are close at hand, and may be offered next week.

LIME JUICE.—Supplies are plentiful and prices are cheap, good raw West Indian offering at 1s. to 1s. 1d. per gal.

MASTICH.—Quiet, with small sales of tear, clean pale of which is worth 1s. 2d. to 1s. 3d. per lb.

MENTHOL.—Quiet, with sellers of Kobayashi crystals on the spot at 9s. 6d. per lb., and for December-January shipment 7s. 9d. per lb., c.i.f., is quoted—a reduction of 6d. on last week's prices. November-December is 7s. 6d., c.i.f.

MORPHINE.—It is thought in several quarters that a reduction will take place in morphine on the part of makers, owing to the crop of opium having proved larger than anticipated.

MUSK.—For genuine grain musk of good quality 72s. 6d. to 75s. per oz., net, is quoted.

NUX VOMICA.—A small business has been done from second-hands at very firm prices.

OIL, CASTOR.—Calcutta continues slow of sale at 2½d. per lb. for seconds.

OIL, COD-LIVER.—Norwegian is finding an outlet in small lots, agents quoting at from 150s. to 155s. per barrel, according to quantity and brand. Our Bergen correspondent writes on September 3 that the oil-market continues very quiet, with a few sales of prime non-congealing cod-liver oil at 150s. per barrel, f.o.b. Bergen. Most of the holders are, however, still confident in prices rising later on. The exports from Bergen to date amount to 4,641½ barrels against 1,879 barrels at the corresponding date of last year.

OILS, ESSENTIAL.—The present price for sweet *Almond* oil (B.P.) is 1s. 2d., and pale 1s. 4d. *Peach-kernel* oil is 7d. to 7½d., and pale 9½d. *Clove* is freely offered at a shade lower prices, 4s. 6d. to 4s. 7d. being quoted, according to quantity. American *Spearmint* has advanced considerably lately, and is worth about 18s. per lb. *Cubeb* oil is a shade easier at 4s. per lb. Genuine *Cajuput* oil still remains scarce and dear, at 3s. 10½d. per bottle. *Citronella* is steady at 1s. 0½d. in drums and 1s. 1½d. per lb. in cases. *Croton* oil may be had at 2s. 6d. per lb., and less for quantity. For forward delivery oil of sweet *Orange* is offered at 6s. to 6s. 6d. per lb., c.i.f. *Bergamot* is firm at 9s., and *Lemon* is quoted at from 2s. to 2s. 4d., c.i.f., according to brand. It is said that there is not now such an accumulation of stocks of lemon oil in Sicily as was the case last year, and that the outlook is tending towards improved prices. Genuine English *Lavender* is quoted 19s. to 20s. per lb., net, from growers in quantity, and 21s. for small lots; and finest French is worth from 8s. to 10s. per lb., having lately advanced. *Rosemary* appears to be a normal crop, but the latest advices in regard to *Spike* oil point out that for every thousand pounds produced last season only about 150 lbs. will be produced this year, owing to the withering of the flowers. As a matter of fact, the present crop is one of the smallest on record, and as the consumption among soapmakers is on the increase prices are likely to be very dear this year. *Sassafras* oil is inclined to be dearer owing to the advance in bark. Guaranteed pure (Stilwell's) is quoted 2s. 6d. per lb., c.i.f., and another holder quotes case lots at 2s. 5d., net. *Eucalyptus* oil is in fair demand, 1s. 2d. being quoted for B.P. quality of high percentage of cineol.

OIL, OLIVE.—A report from Messina, dated August 31, states that the news concerning the crop is becoming more and more unfavourable. Hailstorms destroyed the young olives in the neighbourhood of Messina. Reports from South Italy, the East Coast of Calabria, and Gallipoli are not good. At Gioja the trees had a splendid flowering, but the fruit is worm-eaten and dropping off. Prices have advanced further, rendering export difficult. The following are the quotations: Yellow Messina 32l. 10s., green Messina 32l., burning Russia 34l. 10s. per ton, f.o.b. Messina; Gallipoli 33l. 5s., and choice ditto 33l. 10s., f.o.b. Gallipoli.

A new process of extracting olive oil by chemical means is the subject of a special report by the United States Consul at Leghorn.

OIL, PEPPERMINT.—A rather good business has again been done in American and Japanese oils both for spot and shipment. American H.G.H. has been freely dealt in at 16s. per lb. on the spot from second-hands, and to-day it is doubtful if any more could be obtained at this figure, the general asking price being 16s. 3d., London terms. More demand has been apparent for Wayne County oil, and extreme prices have been cabled from New York—e.g., D. and O. brand at 18s. A parcel of *Stilwell's* oil has been sold at 15s. 6d., and for shipment this brand is quoted 16s., c.i.f. Japanese dementholised has changed hands at 5s. 6d. spot, but the demand has been principally for parcels near at hand, August-September shipment having been sold at 5s. 3d.; September-October is quoted 5s. and December-February 4s. 3d., c.i.f.

OIL, WOOD.—Slow of sale, with offers at 24s. 6d. per cwt., c.i.f.

OPIUM.—Another quiet week has passed in the London opium-market, and prices of Turkish descriptions are tending easier. Persian is firm, but without business.

SMYRNA, August 26.—The week has again been active, sales amounting in all to 192 cases, 15 cases of which were for speculators and the remainder for the United States. Prices for current qualities and usual run manufacturing have advanced fully 2d. per lb. above last week's figures, but for rich Yerli, Karahissar, and Bogaditz sellers still accept the prices quoted in our last report. The difference in morphine being, however, over 1 per cent., it is preferable to buy rich grades. The following are the quotations: Current manufacturing, as to quality, 6s. 4d. to 6s. 10d. per lb.; Karahissar, Yerli, and Bogaditz, 6s. 8d. to 7s. 4d., f.o.b. The market closes very firm with an advance expected for the richer grades. The arrivals in Smyrna to date amount to 2,909 cases, against 1,065 cases at the same period last year.

SMYRNA, August 27.—The sales for the month amount to 765 cases, comprising new Adette, Karahissar, Yerlis, and Bogaditz t.q. at the equivalent of from 6s. 6d. to 7s. 5d. per lb., c.i.f., 102 cases of which were on account of local speculation. The new opium continues to be received in soft condition, and in spite of the advanced season the allowance for waste is still 1½ per cent. In several quarters the crop-estimates have been reduced to a maximum of 9,500 cases, but we still adhere to our former figures of 12,000 cases.

A monthly review of the Smyrna market, dated August 31, states that the sales amount to 701 cases, as follows: 419 cases for the U.S.A., 96 for England, 57 for the Continent, and 129 on account of interior and local speculators. The prices paid were as follows: Current qualities, old or new, 6s. 3d. to 6s. 6d.; selected t.q., usual run, 6s. 6d. to 6s. 10d.; Karahissar, druggists' qualities, 6s. 8d. to 7s.; Yerli and Bogaditz, 6s. 10d. to 7s. 6d. per lb., f.o.b. The arrivals in Smyrna to date amount to 2,909 cases, against 1,065 cases at the same period last year, and in Constantinople to 1,394 cases, against 530 cases in 1903. The stock in first and second hands now amounts to 4,623 cases, against 4,717 cases at the same period last year, and in Constantinople to 1,309 cases, against 635 cases.

PODOPHYLLUM on the spot is quoted at 40s., and new to arrive in November is 30s., c.i.f.

POPPY-HEADS.—New English are now being offered at rather lower prices.

QUICKSILVER.—Mr. Alex. S. Pickering has issued his monthly statistics showing that the imports during August were 759 bottles, against 90 bottles in August, 1903, and for the eight completed months this year imports have been 32,197 against 33,781 bottles. Exports during August were 2,548, against 962, and so far this year 14,793 bottles have been exported, against 13,878 bottles. Average price is 7l. 16s., against 8l. 11s. during 1903.

QUINCE-SEED.—The exports from Cape Colony during 1903 amounted to 2,364 lbs., valued at 77l., against 2,110 lbs., valued at 79l., during 1902.

QUININE.—The heavy bark-shipments from Java during August have depressed the speculative market, and the tone throughout has been flat, the nominal value for German in bulk on the spot being 10½d., and buyers at 10½d.

RHATANY.—Holders have raised their price to 7d. per lb.

RHUPARB.—The s.s. *Cordonan*, from Marseilles, has arrived with 23 cases of flat High-dried.

SAFFRON.—While prices continue higher in Spain than those ruling in London, the demand is only poor, and prices here are unaltered, B.P. quality offering at from 29s. to 31s. per lb.

SARSAPARILLA.—There have been no arrivals of grey Jamaica, and the article is still scarce. About 20 bales of Honduras have come to hand, and a few of native Jamaica.

SASSAFRAS-BARK has had a substantial advance, and 52s. 6d. per cwt. has been paid on the spot.

SENEGA.—The price is still 3s. 2d. net, spot, at which retail sales have been made.

SERPENTARY is dearer, at 1s. 10d. per lb., net, on the spot.

SHELLAC.—The market has been quiet in all positions, and prices show no appreciable alteration. On the spot full prices have been paid for small parcels, fair TN Orange selling on a basis of 208s. per cwt., and cakey AC Garnet at 192s. Futures have been steady but quiet, the small business done including TN for October delivery at 205s., and December at 195s., there being further buyers at these prices on Wednesday.

SPICES.—At auction only 191 barrels of Jamaica *Ginger* were offered, for which no demand was shown. *Cochin* sold at easy prices, including washed rough at 17s. for dull medium and wormy, shrivelled 17s. 6d., medium and small brown Calicut rough at 19s., and mouldy at 16s. 6d. to 17s. per cwt. *Pepper* is firm, with spot sellers at 5½d., at which business has been done, and August-October at 5½d. per lb. *White pepper* at auction was bought in at 7½d. for Lampong. Privately fair Singapore has been sold at from 7½d. to 8d. per lb., and there were buyers on Wednesday at the latter price. Penang offered at 7½d. spot. *Chillies* sold at full rates in auction, including good bright at 46s. 6d. to 47s. 6d. and yellowish at 46s. Large Japan were bought in at from 32s. to 38s. *Capsicums* sold at steady prices. *Pimento* proved dull of sale, and of 238 bags offered 34 sold, without reserve, at 2½d. per lb. for greyish. Zanzibar *Cloves* (50) at auction were bought in and good Penang (2) sold at 9d. per lb. Privately, business has been done on the spot in Zanzibar description at 7½d. to 7¼d. for fair, and for arrival over 1,000 bales have been sold, including November-January and January-March shipment at 5½d. to 5½d. per lb., c.i.f. The speculative market has been fairly animated at lower prices for the new crop, several thousand bales having changed hands, including August-October delivery at from 6½d. to 6½d., October-December at 5½d. to 5½d., and January-March at 5½d. to 5½d., closing sellers at these prices on Wednesday.

SUGAR OF MILK.—There has been a fair demand for Italian to arrive at 55s. 6d. per cwt. for best powder in quantity, but for prompt, which is scarce, 60s. would have to be paid for cases.

SULPHUR.—Foreign flowers are quoted 6l. 7s. 6d. per ton ex wharf, and *roll* 5s. less. Best thirds may be had at 87s., c.i.f. terms. In the course of a Messina monthly review of the sulphur-market during August, it is stated that the continued high prices quoted by the monopoly have created considerable competition on the part of the Louisiana mines in the United States and the proprietors of the mines in question are establishing agencies at Hamburg and Marseilles for the sale of their product. The total stocks of sulphur in Sicily at the end of July amounted to 293,188 tons, against 304,255 tons last year; but on investigation there has practically been no reduction in the production this year. There has been a good demand for France and Italy for the treatment of vines, but for other industries there has been a considerable shrinkage in exports. Owing to arrivals of the new fusion prices declined 1s. to 2s., but only for brimstone offered by "outsiders," which comes on to the market in small quantities only. The Anglo-Sicilian Company, on the other hand, maintains prices, waiting until the supplies from "outsiders" are exhausted. Pure sublimed flowers are quoted 109s., current 101s. 3d., best-ground seconds 90s. 6d. per ton of 13 Sicilian cantars, f.o.b.

TRAGACANTH.—The higher prices asked have restricted business, and the market is momentarily quiet. Firsts are quoted 13l. 10s. to 14l., seconds 12l. 10s. to 13l., thirds 11l. 10s. to 12l. 5s., and fourths 8l. 10s. to 10l. 10s. per cwt.

WAX, BEES'.—Sales of fair Bombay have been made at 5l. 12s. 6d. per cwt. The exports from Cape Colony during 1903 amounted to 2,802 lbs., against 6,082 lbs. in 1902.

WAX, CARNAUBA.—A Continental advice states that the market is tending lower, and both first and second hand dealers have reduced their prices. The consumption has fallen off on account of the high prices prevailing for some time past, and of the fact that a substitute is being used in many directions. The stocks in Hamburg are large, in addition to which Brazilian dealers are making offers of the new crop.

WAX, JAPANESE.—On the spot 54s. 6d. to 55s. per cwt. has been paid for squares.

ZINC SALTS.—Acetate (B.P.) is quoted 9d. per lb., benzoate 5s. 9d., carbonate 7d. to 7½d., chloride solution B.P. 5d. per lb., oxide B.P. 8d., sulphate B.P. 15s. to 16s. per cwt., dried 25s. to 30s. per cwt.; sulphocarbolate B.P. 10d. to 10½d. per lb., and valerianate cryst. B.P. 8s. 6d. per lb.

CINCHONA-PLANTING IN CEYLON shows a decrease of nearly a thousand acres, the return standing at 2,237 acres, representing nearly five million trees or growing plants.

London Drug Statistics.

The following statistics are compiled from information supplied by public warehouses. They relate to the receipts and deliveries of some of the leading drugs from and into the London public warehouses for the month of August, 1904, and to the stocks on August 31.

	August		Stocks		1904	
	Landed	Delivd.	1904	1903	Imptrd.	Delivd.
Aloes.....cs, etc.	234	102	754	1,012	1,247	1,397
".....gourds	—	—	—	—	—	—
Aniseed, star.....cs	—	4	*21	7	25	4
Arrowroot.....pkgs	1,743	530	13,588	14,975	14,035	14,149
" Balsams.....cks, etc.	13	77	589	778	186	357
Calumba.....bgs	—	—	349	929	30	261
Camphor.....pkgs	694	177	1,724	1,914	5,351	4,546
Cardamoms es, etc.	355	408	3,171	2,675	5,243	4,191
Cinchona.....pkgs	616	965	6,684	6,767	8,357	7,131
Cocchineal.....bgs	50	42	300	563	277	446
Cubebs.....	30	279	*597	1,167	150	431
Galls.....pkgs	60	129	*1,542	5,827	553	4,033
Gums—						
Ammoniacum.....	—	3	11	19	14	16
Animi.....	56	12	567	316	926	584
Copal.....	3,682	5,060	*22,327	34,623	35,299	45,102
Arabie.....	283	660	*7,416	8,338	7,313	10,203
Asafetida.....	125	19	395	269	754	503
Benzoin.....	293	77	1,418	1,871	1,568	1,227
Damar.....	367	513	1,427	2,478	2,417	3,330
Galbanum.....	—	—	3	3	—	—
Gamboge.....	34	30	10	35	158	166
Guaiaacum.....	—	2	49	45	54	43
Kauri.....tons, net	216	175	1,264	782	1,686	1,517
Kino.....pkgs	—	1	*99	151	6	18
Mastich.....	—	10	14	9	24	23
Myrrh, E.I.....	44	25	108	108	197	180
Olibanum.....	304	161	*2,905	2,397	4,691	1,585
Sandarac.....	119	25	1,152	1,319	761	741
Tragacanth.....	197	1,503	3,265	4,044	7,780	8,746
Ipecacuanha—						
Matto Grosso.....	1	42	273	321	241	394
Minas.....	—	9	58	115	2	108
Cartagena.....	1	5	60	255	55	171
E. I.....	—	2	6	25	41	49
Jalap.....bls	—	—	245	121	134	15
Nux vomica.....pkgs	275	4	958	23	1,222	267
Oils—						
Aniseed, star.....cs	50	18	367	737	230	65
Cassia.....	20	8	107	321	166	150
Castor.....pkgs	197	171	802	678	1,361	1,312
Coccol-nut.....tons	113	54	179	565	531	692
Palm.....	—	2	4	7	38	38
Quinine.....lbs	1,250	2,841	211,001	199,228	23,250	21,406
Rhubarb.....chts	50	28	192	330	356	442
Sarsaparilla.....bls	37	109	142	143	619	756
Senna.....bls, etc.	51	248	1,305	1,418	1,674	2,788
Shellac.....cs	6,317	5,356	25,607	18,777	44,353	34,648
Sticklac.....	16	17	258	148	823	726
Turmeric.....tons	11	48	481	439	120	228
Wax, bees'.....pkgs	559	540	1,479	1,977	3,060	3,267
" Japan.....cs, etc.	—	89	521	348	545	407

* Corrected.

† Stocks lying at Smith's Wharf and Brewer's Quay are not included in this return.

‡ Includes the quantity at Red Lion, Bull, and Smith's Wharves; also at the Docks.

College Notes.

IMPERIAL COLLEGE OF CHEMISTRY.—On September 2 the students of this college, accompanied by their principal, Mr. Frederick Davis, visited the Geological Museum, Jermyn Street, W., for the purpose of studying the mineral ores and other objects of chemical interest. The time occupied exceeded two hours, and much valuable information was acquired by the students.

THE FOLLOWING EDUCATIONAL INSTITUTIONS are advertising in this issue:

South London School of Pharmacy, 325 Kennington Road, S.E.

Metropolitan College of Pharmacy, 160 to 162 Kennington Park Road, S.E.

London College of Chemistry, 323 Clapham Road, S.W.

City of London College, White Street, Moorfields, E.C.

Burlington Correspondence College, 8 Crescent Grove, Clapham Common, S.W.

Manchester College of Pharmacy, 225A and 227A Oxford Street, Manchester.

Northern College of Pharmacy, Burlington Street, Manchester.

Nottingham School of Pharmacy, 13 Victoria Street, Nottingham.

Louisiana Purchase Exposition.

Chemical and Pharmaceutical Arts.

By OUR SPECIAL REPRESENTATIVE.

THE UNITED STATES.

THE United States exhibits in this section are the most meagre that could be imagined. Strictly speaking, not more than four comprise the exhibits in this group. Of these, that of the Mallinckrodt Chemical-works, of



MALLINCKRODT CHEMICALS.

St. Louis, Mo., is the largest, consisting of an imposing pyramidal display of chemicals, of which especial mention may be made of beautiful crystals of ammonium bichromate, strontium bromide, the rarer chemicals thiosinamine, potassium chloroplatinite, diacetyl morphine, magnificent crystals of cocaine valued at \$3,500, morphine sulphate 1,500 cubic inches, and a striking crystallisation of terpin hydrate arranged in monogram.

Wm. R. Warner & Co., of Philadelphia, show a case of their pharmaceuticals, galenicals, pills, and parvules in different styles of coating, digestive ferments, and other of their well-known specialities, such as ingluvin.

Roessler & Hasslacher Company, of Frankfort-on-Main



THE ROESSLER-HASSLACHER PAVILION.

and New York, have a unique pavilion representing an alchemical laboratory, showing their chemical and techno-

logical products, including cyanides, sodium peroxide, chloroform, formaldehyde, and alkaloids. A quantitative exhibit of opium and its principles, together with a series of morphine salts, is also shown. Besides these are found the Lambert Pharmacal Company (listerin and other specialities), the Imperial Crown Perfumery Company, the Mellier Drug Company, Allan's perfumes (exhibiting a new process for making perfumes, consisting in subjecting the perfumed spirit to long-continued agitation to develop the bouquet rapidly), and the Luyties Homœopathic Pharmacy Company, all of St. Louis. The Walker-Gordon Laboratory Company show their method of preparing modified milk by pasteurisation and adjustment of fats and solid to suit infant-feeding, which is supplied through stations in the several cities. Conspicuous is the Fairy Bubble Fountain with its never-ending pillar of airy foam from a famous soap. Freck & Co., Chicago, display their tablet-machines, crushers, pulverisers, and a new style of pill-coating apparatus in which the pans revolve on rollers instead of on the customary axes. Besides these, a surgical-instrument and artificial-limb exhibit of A. Marks, New York, represents all of pharmaceutical interest in the United States Section of the Liberal Arts Building.

FRANCE.

The French exhibit is very similar to that at the Chicago Fair, the same uniform wall-cases being employed. While the installation is far from satisfactory in affording opportunities for critical examination, the management is, to use a Western phrase, "the limit." The persistent efforts of your representative to secure information or literature to facilitate description of the exhibits were rendered entirely futile by the density of the agents, Kaleski & Co., who refused assistance. A copy of the "History of the Pharmacie Centrale de France," which I had seized upon for want of anything more interesting, was rudely taken away; when photographs of the exhibits were asked for the manager nearly had a fit, and when shown some photographs of the British and German exhibits he entered into an argument with his assistant which came near terminating in "une affaire d'honneur." How different at the Chicago Fair, where the genial Mason represented Rigaud & Chapoteaut! Yet the list of exhibitors is a long one—109 in the chemical and pharmaceutical arts, comprising about forty each chemical and pharmaceutical, ten each perfumery and soaps, decorative materials, and technical products. Besides this group there are twenty exhibits in medical and surgical apparatus and twelve of instruments of precision, including the fine balances of Armand Collot, Paris. Among the most interesting exhibits may be mentioned crude drugs in packages with glass fronts, Louis Delage, Paris; hydrofluoric acids, Leon Baurdeau, Ivry-sur-Seine; chemicals for paper-manufacturers, Corbin & Co., a Chedde par Le Fayet; biscuits, bonbons, and alkaloids, Ch. Buchet, Paris; dried peptones, Byla, Gentilly; antiseptics, Jean Faure, Paris. A fine collection of Behal's synthetics is shown by Ecole de Sciences; also a collective exhibit of essences and perfumes by Ecole Haute Etude Commerciale. Altogether the most interesting exhibit is that of Roure Bertrand fils, Grasse, Alpes Maritimes, comprising a model of the manufacture of perfumes, from the cultivation of the plants and experimental garden, the collection of the flowers, the different methods of their extraction by the process of *enfleurage* with and without heat, the separation of the perfumed fats, their principles, and some concrete oils. The French colonies are represented by Reunion oils and perfumes, some chemicals and drugs.

GERMANY.

With the exception of a pavilion of six of the leading perfumers and an elaborate display of models and charts of canals, bridges, public works, etc., there are no German exhibits in the Palace of Liberal Arts. This is probably due to the fact that the classification and the groups in this department were designed by an engineer, with which the Germans could not or would not comply, and therefore sought space elsewhere for their chemical and pharmaceutical arts exhibits. In the Palace of Electricity occupying a considerable area, known technically as "Deutsche Unterrichts-Ausstellung-Chemie," is found a group of exhibits representing about 180 individuals, firms, and institu-

tions, while that of "Medizine," representing about 150 exhibitors, is installed in the Palace of Education.

Whoever remembers the collection of eighty-six exhibits in the German Section at the Chicago Fair—two-thirds of which were coal-tar products—would imagine that the possibilities of the benzol molecule must surely by this time have been exhausted, and that the Farben Fabriken must confine their efforts to the exploitation of "dye-stuffs," instead of continuing their strenuous career in supplying "die-stuffs" *für dem auslande* and causing pharmacists who try to get acquainted with all the new names to become prematurely aged. Alas! it is feared that the wish is simply father to the thought. German chemists have evidently come to the conclusion—as have some other people—that since the possibilities of the wonderful "ring" so successfully worked by Hofmann are limitless (synthesis being a mathematical proposition in fact of geometric progression), there is no necessity to exhibit the products again, but simply to show "how the trick is done." This has been accomplished, and the educational exhibit is a noteworthy contribution to the status of modern chemistry. The entire exhibit, which is in a separate enclosure, has twelve divisions, as follows:

1. Reading-room and library.
2. Alchemic laboratory.
3. Liebig's laboratory reproduction.
4. General and inorganic chemistry: Gas-analysis.
5. Pyro-chemistry.
6. Balances.
7. Electro-chemistry.
8. Organic chemistry: Elementary analysis.
9. Dye and dyeing laboratory.
10. Apparatus: Heavy and pharmaceutical.
11. Physiologic chemistry and fermentology.
12. Administration bureaus.

In the reading room are busts of seven of the most eminent German chemists: three seen in the illustration,



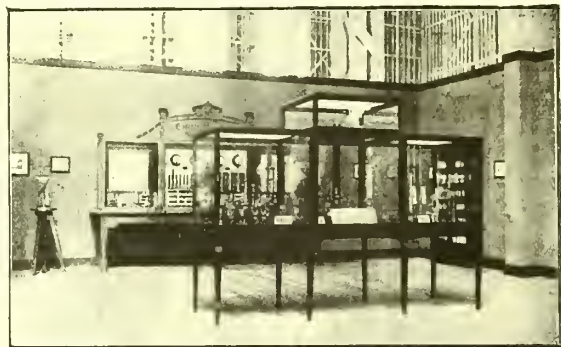
IN THE GERMAN READING-ROOM.

reading from right to left, are A. W. Hofmann, Liebig, and Kekulé; while opposite, but not appearing in the illustration, are Mitscherlich, Wohler, Victor Meyer, and Heinrich Rose. The library contains rare books of the alchemists, the latest works on chemistry by German authors, and some 3,000 dissertations. The alchemical laboratory was illustrated in a former article, as was also the Liebig laboratory—a reproduction of that occupied by the famous chemist in Giesen in 1855, which contains a number of original preparations made by him and his associates.

GENERAL AND INORGANIC CHEMISTRY.

Arranged as a modern laboratory, there is shown a work-table, model of that used in the Berlin University chemical laboratory, equipped for qualitative and quantitative analyses. A collection of apparatus for determination of molecular weight and vapour-density (Victor Meyer's method) is arranged according to the temperatures. Porcelain and platinum vessels are exhibited, and glass vessels made from Berg-Kristall, showing a large Dewar's tube not fractured by unequal expansion or contraction. Models also show the application of physical chemistry to the Stassfurt alkali-geologic formation, and a corner is

equipped for gas-analysis. There are, besides, collections of inorganic preparations, compounds and elements arranged according to Mendeléeff's system, and rare chemicals and technical agents, including also some 118 synthetic colours. The balance-room contains the well-known Sartorius balances, and the division of pyro-chemistry electric furnaces of Dr. Borchers, Aachen, and W. C. Heraus Hanau, after an American patent. The electro-chemical laboratory contains a work-table with apparatus for quantitative analysis (Classen), reduction of



THE ELECTRO-CHEMICAL LABORATORY.

nitro bodies by Elbs, regulating apparatus, and a collection from Hofmann House (the home of the German Chemical Society) of preparations made by electro-chemical methods. In a glass case are the historic apparatus of Kohlrausch, ozone apparatus of Harries, and Siemens tubes used in the University.

ORGANIC CHEMISTRY.

Here also is a model work-table provided with all the apparatus required to produce carbon compounds, also a general table for distillation under reduced pressure and for similar operations, and equipment for elementary analyses. A collection of some 2,000 articles contributed by firms and individuals comprises the following:

1. Preparations of the fatty series, among which are series of esters, prepared by Wislicenus, and compounds by Ost, Engler, Marckwald, Fromm, etc.
2. Derivatives of acids, among which may be mentioned synthetic theobromine by Traube; purine and xanthine syntheses by E. Fischer; uric-acid syntheses by Behrend; tautomerism illustrated by Knorr's work; series of specimens by Anschütz and his collaborators, and nitrogen compounds by Schöle, Pinner, Beckmann, Buckner, etc.
3. Aromatic series: Hydrazine compounds by E. Fischer and Wohl; nitro-phthaleins by Salkowski; besides embodiments of researches by Richard Meyer, Dobner, Noltzing, P. Jacobson, Liebermann, G. Schultz, etc.
4. Technical preparations are grouped in their constitutional order—benzol, aniline, phenol, amidophenol, and benzidine—with all their derivatives; diphenylmethane and triphenylmethane and the whole series of dye-stuffs to anthracinone and indigo with their intermediary products. Here Liebermann shows the first alizarin synthesis, 1869, and Bayer that of indigo, which is exhibited in beautiful specimens 99.9 per cent. pure. Hydro-aromatic compounds, terpene bodies, and camphors are shown in their constitutional sequence, beginning with ketone, the most important contributors being Wallach, Bredt, Beckmann, Fromm, Harries, and F. Mahla, of Berlin.

Dr. Mahla was one of the organisers of the Chicago College of Pharmacy in 1859, and its professor of chemistry in the early 'sixties, when he founded a chemical-works and built up a large business purifying sulphuric acid from the crude article obtained as a by-product in the zinc-works on the Illinois River at Peru. Some twelve years ago he sold his interest to the General Chemical Company (the chemical trust) for a million dollars, and returned to Germany, where he has since been engaged in researches in the terpenes at the Berlin University.

Synthetic odorous substances, hetrocyclic carbon compounds and alkaloids are also shown, among them being illustrations of researches on hydrastine by Freund, morphine by Pschorr, quinine by Rohde, and pilocarpine by

Pinner, besides a large collection of technical products. The dye and dye-works division contains a model working-table, schemes and charts for processes and testing, and a spectroscope from Zeiss, in Jena, for dye-workers' use.

In the apparatus department agitating-machines are conspicuous, together with quite a collection of the metal ware and pharmaceutical apparatus by Christ and Lentz in Berlin. Christ's small vacuum pans are decidedly ornamental, and their cost within the reach of the pharmacist (210 marks).

The physiological and fermentological division is represented by a collection of remedial agents, scientific preparations of the sugar group, albumin and yeast chemistry, and some allied technical preparations. Over the central case hangs the picture of "the master of organic synthesis," Dr. Emil Fischer, Berlin; while the bust of Maercker occupies a conspicuous place—an honour accorded him as the founder of the technology of the fermentation-products and allied industries.

Such is a brief description of the exhibition participated in by 117 teachers in the German high schools, twenty-five manufacturers of chemical apparatus, and thirty-nine establishments devoted to the commercial exploitation of Germany's chemical-products. Everywhere may be seen the master hand and mind of some central scientific authority—not simply the finger of some magnate. Dr. Otto Zwingenberger is the Commissioner in charge, whose courtesy to our representative we hereby acknowledge.

Duty-free Alcohol Inquiry.

THE Chancellor of the Exchequer has appointed the following gentlemen to serve as a Committee to inquire into the use of duty-free alcohol for industrial purposes: Sir Henry Primrose (Chairman), Professor Sir William Crookes, Sir W. Holland, M.P., the Hon. J. Scott-Montagu, M.P., Mr. Lothian D. Nicholson, Dr. W. Somerville, Dr. T. E. Thorpe, and Mr. Thomas Tyrer. The terms of reference are mentioned and discussed in an editorial note in this issue. It is officially announced that all communications in regard to the inquiry should be directed to Sir H. Primrose, K.C.B., at Somerset House, Strand, London, W.C. We subjoin some personal notes on the members of the Committee.

Sir Henry Primrose, Chairman of the Board of Inland Revenue and of this Committee, is a grandson of the fourth Earl of Rosebery. He was educated at Trinity College, Glenalmond, and at Balliol College, Oxford. In 1869 he entered the Treasury, and among other important offices was Private Secretary to the Marquis of Ripon when Viceroy of India and to Mr. Gladstone in 1886. In that year he was appointed Secretary to H.M. Office of Works, holding the office until 1895, when he was appointed Chairman of the Board of Customs, and in 1899 he succeeded Sir George H. Murray as Chairman of the Board of Inland Revenue. Sir Henry Primrose's experience in the two revenue departments is exceptional, and will be of great value to the Committee.

The Hon. John W. E. D. Scott-Montagu, member for the New Forest division of Hants, is the heir to Baron Montagu de Beaulieu. He is a leading motorist, and it is largely owing to his advocacy of spirit as a motive-power, and his hard work privately and publicly, that the agitation for an inquiry has been crystallised. Mr. Scott-Montagu's interest in the matter is not altogether recent, for it was mainly due to his enthusiasm in regard to duty-free alcohol that the demonstration before the King and the German Emperor was made at Sandringham two years ago.

Mr. Lothian D. Nicholson, Chairman of the London Distillers' Association, is the representative of the spirit interest on the Committee. He is a director of J. & W. Nicholson & Co. (Limited), distillers, Bromley, E., and took part in the discussion on Mr. Tyrer's last paper on the subject before the Society of Chemical Industry. He favours freer use of alcohol for industrial and motive purposes.

Dr. William Somerville, F.L.S., F.R.S.E., is Assistant-Secretary to the Board of Agriculture, whose interests are closely connected with the subject. He is a Scotchman, who graduated in science at the Edinburgh University, and

as D. Sc. at Munich. He has held appointments as lecturer or professor in agriculture and forestry at Edinburgh, Durham, and Cambridge (King's) Universities.

Sir William Crookes, F.R.S., is the well-known chemist and technologist. On the Committee he will doubtless play the part of unofficial expert chemist. Sir William is a Past President of the Chemical Society, and although he has acquired an international reputation as a scientific seer, he has an intimate acquaintance with chemical industry, and is a practical business man.

Sir W. H. Holland, the Liberal member for Rotherham, is one of those who took part in the House of Commons discussion on this subject. He is a cotton and worsted spinner at Manchester, and a former President of the Manchester Chamber of Commerce, which has long identified itself with the subject from the synthetic dyes point of view.

Dr. T. E. Thorpe, C.B., F.R.S., Director of the Government Laboratories, may be regarded as the custodian of the official records on the chemistry of duty-free spirit which have accumulated since his predecessor, Mr. George Phillips, first started on the subject in 1847. He has been President of the Chemical Society and of the Society of Chemical Industry, has occupied three professorial chairs, is the author of many books and papers, is an inspiring chief, and diplomatic as well as sympathetic.

Mr. Thomas Tyrer, F.I.C., F.C.S., who has worked so long to bring about the inquiry, is the son of a schoolmaster, and a pupil of Hoffmann, one of the three experts who half a century ago advised the Board of Inland Revenue that chemical-manufactures would not be benefited unless the duty-free alcohol was denatured with purified wood-naphtha. That advice was not acted upon. Chemical manufactures have not progressed so much as they would have done had it been accepted. Mr. Tyrer is managing director of the company of chemical manufacturers with which his name is associated, and is one of the founders and a Past-President of the Society of Chemical Industry. On the Committee he represents chemical and pharmaceutical manufacturers.

We understand that the Committee will not meet until the autumn, all the members being out of town. Sir Henry Primrose is spending his vacation on the Continent.



SIR WILLIAM CROOKES, F.R.S.



DR. T. E. THORPE, C.B.



MR. T. TYRER, F.I.C., F.C.S.

Sweetness and Sustenance.

IT is agreed among the ladies who haunt the gallery of the Agricultural Hall this week that there never have been such dreams in wedding-cakes seen in the memory of the oldest exhibitor. Looking down on the pageantry of bakery and confectionery in the hall below, they are also of one mind that it is one of the prettiest of the many pretty exhibitions produced by the Confectioners, Bakers, and Allied Traders. Below there is a little grumbling among the sternly practical male persons in charge of exhibits regarding the "slowness" of business.

COMPETITIONS.

There are many competitions, and much money is distributed in awards. The best makers of Welsh bread, Scotch bread, Irish bread, wedding-cakes, Christmas cakes and so forth are likely winners of prizes, and there are competitions for supper-table displays, for pork pies, and for British honey. The last-named section is an interesting one for pharmacists, and there are some creditable exhibits. There are two excellent "Honey Trophies" in special positions in the Main Hall, and in the Minor Hall there are two working exhibits of modern bee-keeping and honey-production, under the direction of Messrs. Herrod & Stewart, of Luton, besides a large number of exhibits of honey in comb and extracted—the latter varying in shade from very pale to dark brown. Some beautiful beeswax, in squares or cakes of various sizes suitable for retail trade, is interspersed with these. One of the most successful exhibitors in this section appears to be E. C. R. WHITE, of Newton Toney.

In the Minor Hall, also, there is an imposing exhibit of Canadian products, including Manitoba honey, packed baking-powders, and tinned fruits in much variety.

CHEMICALS, ESSENCES, AND NUTRIENTS.

The fine pavilion of the LONDON ESSENCE COMPANY is as attractive as ever, both externally and internally. A new branching-out of the company is indicated by the handsome showcase on one of the ledges, filled with bottled perfumes. Hitherto the company have not gone beyond perfumes in bulk, but now they have taken to packing their perfumes, and a selection of very handsome bottles and caskets is on show, with some good-class and well-executed labels. Two new odours, "Nicosia" and "Mathiola Stocks," are now prepared (in addition to the usual lines) in concentrated form, either for use as perfumes or as floral ottos for confectionery. A new series of cachous comprises "Nicosia," "Mathiola Stocks," "Sweet Favours" and a special musk. The latest soluble fruit-essences for beverages include a "Cherry Plum" and a "Peach and Apricot." The usual essential oils, confectioners' colours and drugs (gingers, vanillas, etc.) are shown in prodigality but with taste. Exhibits of confectioners' chemicals and colours are also made by HASSALL & Co. (who boom "Lasite"—a cream-of-tartar substitute), by the MANCHESTER CHEMICAL COMPANY ("Malto-Fermo," a powder malt extract, being among the novelties from Manchester), and by BAKER & Co., MANCHESTER (LIMITED). The "Lothian" malt-products and "Malto Glycerol" are among the exhibits of the BRITISH MALT-PRODUCTS COMPANY; EDME (LIMITED) are showing the "Edme" diastase preparations; "Laurel" yeast and malt extract are the staples of C. DE KIMPE & Co.; HENRY J. MOGRIDGE shows "Peptase," an English malt extract of good quality, and various essential oils and colours; while the "Bermaline" malt extract is belauded by MONTGOMERIE & Co. "Malto Milk Cocoa" in powder form and possessing many digestive-aid properties is shown, among other things, by CHELTINE FOODS (LIMITED). In the gallery Maggi's soups are served to visitors by COSENZA & Co. Liqueur confectionery in multitarious shapes and sizes is shown by VOILE & WORTLEY. GORDON & DILWORTH'S TOMATO CATSUP (LIMITED) have an exhibit in the Gallery. A smart and attractive show of Adam's "Tutti-Frutti," Beeman's pepsin gum, Kis-Me gum, and White's Yucatan is made by the AMERICAN CHICLE COMPANY. Toffee in tins, boxes, packets, and so on is shown in a neat little corner opposite the Arcade entrance by JOHN MACKINTOSH (LIMITED). Scotch rock (1d., 3d., and 6d. packets) and toffee gums (1d. packets and 4-lb. tins) are the latest

Mackintosh delicacies. Dried milk products—"Casone," "Star Brand," "Full Cream," etc. (for which nutritive properties combined with perfect sterility are claimed)—engage the attention of the DRIED MILK COMPANY (LIMITED).

MACHINERY.

One of the sights of the exhibition is the "up-to-date working bakery" in full swing, installed along the south wall by WERNER, PFLEIDERER & PERKINS (LIMITED). This exhibit attracts an abnormal amount of attention. WALLACH BROTHERS are showing their "Ever-trusty" machines for whitewashing, disinfecting, etc. The "Little Wonder" is something of a great wonder to the onlookers. The "Sutcliffe Rapid Bottle and Jar Dryer" is a piece of apparatus worth the attention of wholesale druggists or any manufacturers to whom dry bottles are a requisite. A special machine is made 4 feet 6 inches by 2 feet 6 inches for bottlers and manufacturing chemists, and the process is simple. The machine is supplied with fifty brass tubes of different sizes, each provided with a holder. Each tube is fitted with a valve, which opens when the bottle, etc., is placed mouth downwards on the holder, and a stream of hot air is admitted into the bottle. When the bottle is taken off, the valve in the tube closes automatically. Fifty bottles can be drying at once, and they dry so quickly that there is no after-sweating. The tubes are made to fit any size bottle from a 2-oz. to a Winchester. The machine is used by one of the oldest and also by one of the most modern wholesale drug-houses in the trade, and the saving in breakage of bottles is said to be considerable. The price complete is 60*l*. FRED P. HUNT is showing an ingenious novelty in revolving window-shelves, which will take the fancy of many chemists who believe in the power of the window to fill the till. The glass shelves revolve round a mirror in the centre of the ascending and descending shelves. The reflection gives the appearance of double width to the shelves, and as the descending shelves are not visible, the impression is given of a never-ending supply of goods being brought up from below and disappearing above, as the mechanism is hidden by the drapery. The motive-power is electric.

WM. GARDNER & SONS have a large and engaging display of their "Rapid" sifters and mixers. The Pascaur (Chamberland) filters, and various other kinds of filters and disinfecting-apparatus, are exhibited by J. DEFRIES & SONS (LIMITED). Soda-fountains, aerated-water apparatus, and the requisites for the production of American iced drinks are comprehensively displayed by FARROW & JACKSON (LIMITED). THOMAS O'BRIEN has his usual allocation in the Gallery for the demonstration of the merits of his check-tills. "Carter's system" of grinding (sugar, spices, ammonia, etc.) is seen at the stall of J. HARRISON CARTER. By this "system" the sugar, etc., is reduced to powder by percussive action as distinct from fractional grinding. ROTHCHILD & BAKER and the BRISTOL WAGON AND CARRIAGE WORKS COMPANY (LIMITED) have fine displays of light trucks, barrows, carts, coburgs, vans, etc.

VARIORUM.

A full display of doggy delicacies, poultry pabulum, and bird ballast is given by the omnipresent SPRATTS' PATENT (LIMITED). Aesthetic seeds for aesthetic song-birds, and various other birdie titbits are shown by R. HYDE & Co. (LIMITED). The swift and sure massacre of the wildest cockroach or the most tenacious beetle is guaranteed by the AMERICAN COCKROACH AND BLACKBEETLE SOLVENT COMPANY, whose natural-history museum attracts the curious, and is an effective object-lesson. YOUNG'S PATENT HYGIENIC BIN COMPANY have added a coal-bin to their series. It is made of galvanised steel, and the contents are extracted by a shovel from an aperture at the bottom of the bin. An elaborate exhibit of fittings for shops or windows, with show-stands, glasses, weighing-machines, chairs, marble-topped tables, and other requisites of the shopkeeper is made by PARNALL & SONS (LIMITED). A smart and handy series of carrier paper bags is produced by W. A. PENNY & Co., and the PAPER SHAVINGS COMPANY have a brilliant exhibit of shavings, in every colour, quality, and width, suitable for packing and window-decoration. These might with advantage be employed occasionally in place of cotton-wool for the perfumery or fancy trade.